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VOL. CXIX.—No. 4048. SEPTEMBER 3, 1920.

THE RESETTLEMENT COMMITTEE AND THE GOVERNMENT.

THE action of the Resettlement Committee of the Joint Industrial Council for the Building Industry in rejecting the Government's proposals for increasing available labour for building, though probably expected by many, will not increase the popularity of the Council with the public. The proposals put forward by the Government could not be regarded as unfair. First, an increase of workers was proposed by the grading up of unskilled labourers, by the admission of more apprentices, and by the admission of ex-Service men as learners. These proposals were not made without a *quid pro quo*, but we will deal with them on their merits. It should surely be the wish of all operatives that those in any way engaged in the building trade should have an opportunity of improving their position. If a labourer can be up-graded to any advantage he must be a man capable of doing better work than he is doing at present. We understand that the operatives are loud in their demands for better education, a wider outlook on life, and a helping hand up the ladder to those who can benefit by it. The son of the labourer, then, would be invited to study a trade and raise himself to better things; is there any better means of inducing him to do so than seeing his father progressing on the same lines? No one wants to up-grade a man who is devoid of ambition, but there are many labourers who, although they lack regular training, are, with supervision, capable of doing the more simple operations of the skilled trades. The admission of more apprentices, whatever may be contended as regards the labourers, is surely a thing which no genuine advocate of advancement should object to. The apprenticeship system has been criticised, but under the new Education Act many of those youths will have to attend Continuation Schools, and should thus enjoy the benefits of education side by side with the learning of their craft. As pointed out by Sir Robert Horne, in summing up the discussion, the number of apprentices is much less than it used to be and much below the strength allowed by the rules of the various trade unions. Lastly, the plea for the admission of the ex-Service man as a learner should appeal to any but the most selfish. Here are men who have been deprived of their livelihood by their country's call and who now merely ask for a chance of working. After Lord Haig's appeal we can hardly believe that the Resettlement Committee can persist in a refusal to admit these men as learners. Long ago we suggested the possibility of short intensive courses which should enable men to do useful work in the building trade after a brief training, and we proposed that the position of the trade should be safeguarded by a distinctive mark upon such men and their employment solely on housing schemes. We are told that there are 10,000 unemployed ex-Service men who have been bricklayers' labourers, and if the trade is not ready to allow these men to lay bricks after passing such tests as will ensure the trade not being discredited by their work, we have a very poor opinion of the gratitude felt for the national services they have rendered in preserving our country. Had they been less unselfish we might have now been paying taxes to Berlin, in which circumstances we imagine the building industry would not have found itself quite in the position it commands to-day.

We have it on the authority of one who worked on this subject during the war that a man of ordinary intelligence can well qualify himself for work in a strictly limited sphere of a trade in a few weeks, and our proposal was that men thus admitted should be placed under the supervision of a skilled artisan, who should be compensated for his additional trouble and responsibility. We put it to the Bricklayers' Union, or, indeed, any other union which could usefully employ such dilutees—and most trades could—that the wage of any skilled operative who would undertake the supervision of, say, ten such men, to be fairly treated in a sympathetic spirit, should be doubled, the pay of such men to be a matter of fair arrangement with the union concerned. Were such a scheme adopted we should see a vast increase in skilled wages, in building progress and, in what is most important, the discharge of a national debt to those to whom we owe our present safety. This is not asking something for nothing, but our appeal is to a sense of fairness. And let the man who hesitates reflect upon how he would have treated those ten men in khaki had they stood between his family and a German army of invasion. Were there not enough building to go round, neither we nor anyone else would wish to impose on the trades conditions which would have the effect of introducing new operatives, but these are not the circumstances. It is repetition *ad nauseam* to point out that there is work for years and years waiting to be done, and that the admission of every conceivable applicant could not possibly for a long time to come give rise to any slackening in demand provided a fair return on the part of labour were forthcoming. The Government's proposal that overtime should be permitted on housing schemes we need hardly deal with; at present rates of pay it is not asking any great concession on the part of the trades to get on with the work so necessary to the nation. Finally, the scheme carried a guarantee against loss of wages due to bad weather.

The proposals of the Cabinet Committee offered a very fine opportunity for a response on the part of the Resettlement Committee which would have established general confidence and given a great impetus to many schemes which are at present put on one side. This opportunity has been missed, as others have been missed, but humanity can get round most things in time, and in the long run selfishness never pays. We recently met a manager of a large business, and heard that he was erecting cottages for great numbers of workers in a brick district. Hearing that an engineering firm was doing the whole of the work in steel and stucco, we were anxious to know the reason. He replied that, although he could get bricks, progress was so slow and bricklayers so uncertain that it paid him better to avoid the building trade as far as he could. There is such a thing after all as making oneself too precious, and this process carried to extremes may carry one out of existence. It does not matter to the trade now what this man does, but in ten years' time further cottages will probably be built by engineers and useful work for building operatives be thus lost in this district. The Building Trades' Parliament tells us that it is out to create a great industry for the service of the nation, and we invite a proof of that statement (which hardly yet seems forthcoming) though we are still hopeful of a better turn in events.

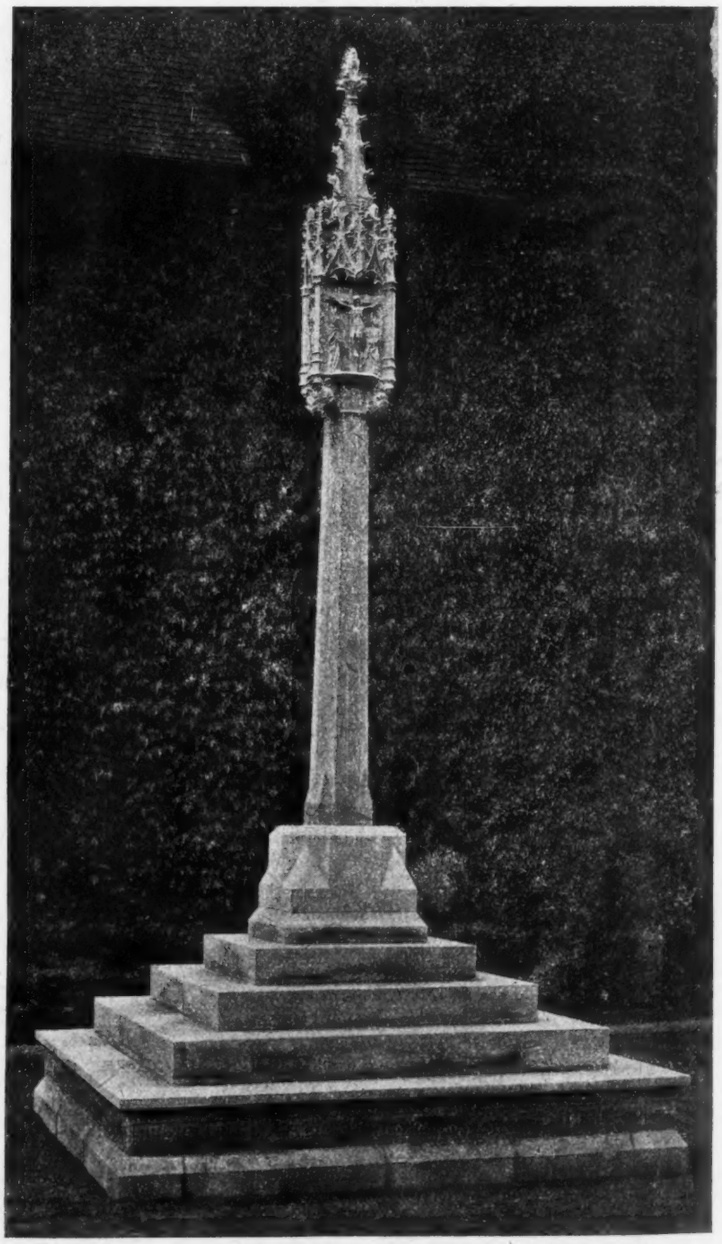
NOTES.

Belgian Honours for a Past President of the R.I.B.A.

THE many friends of Mr. Ernest Newton, C.B.E., R.A., Past President R.I.B.A., will be glad to know that the King of the Belgians has bestowed upon him the Cross of Officer of the Order of the Crown. The Belgian Ambassador, in forwarding the insignia, stated that the Foreign Office had communicated to the Embassy His Majesty King George's permission for Mr. Newton to accept and wear the decoration on certain specific occasions. It will be remembered that Mr. Newton had scarcely been installed in the R.I.B.A. Presidential Chair when the war broke out, and he had to contend with the unprecedented difficulties and anxieties that beset the President of the Institute at that trying time. Amid the stress of it all he lost no opportunity of showing in the most generous form his sympathies with the numerous Belgian architects who had sought asylum in this country from the terrors of the German visitation, and his own personal hospitalities and benefactions were freely bestowed upon the refugees. Such opportunities as his official position afforded were utilised to the utmost on their behalf, and he was unsparing of himself in his exertions for the amelioration of their hard fate. Gratifying testimony to the success of his efforts will be found in the letter addressed to the Institute from the President and Vice-Presidents of the East Flanders Society of Architects, where it is stated that it was owing to the R.I.B.A. that the greater number of their expatriated brethren were able to live in comfort and dignity. Mr. Newton will have the sincere congratulations of the profession upon the honours which have come to him.

The City Churches.

A USEFUL letter has been addressed to the Bishop of London by a body of City clergy in regard to the Report of the Commission appointed to advise on the matter of the City churches. The signatories make many pertinent observations to which no doubt the Bishop will give full consideration, especially their remark that a much larger public is hastening to protect architectural and historical associations. "These," they say, "are far from unimportant. The presence of these buildings at the centre of our commercial life exercises an influence which cannot be exaggerated upon London life in particular, and upon the emotional life of the whole Empire. . . . We agree with Lord Hugh Cecil's view that it is 'too early to determine how many of the churches are really and finally useless and ought to be removed.' This we believe can only be done after a properly co-ordinated scheme has brought them into relation with one another. And to that end we press for the appointment of a permanent Commission which shall have the management of all surplus City church funds, with instructions to devote them from time to time to the constantly changing needs of the Church in the City and Greater London. . . . We strongly protest against the recommendation of the Commission to demolish nineteen historic churches. The Report rightly declares that 'a strong case ought to be made out before any church is removed, or any site once set apart for such purposes converted to secular uses.' There is no evidence in the Report that efforts have been made to make out such a case; and it should be done, we maintain, in every separate instance. There are, on the other hand, churches marked down for demolition whose removal would be deplored by all who know the work they are doing, and the part they play in the daily life of the City. . . . The buildings which it is proposed to destroy are irreplaceable. Not any of them, we submit, should be demolished until such a competent body as we have proposed has considered the problem as a whole, and examined the case of each individual



War Memorial, Cuddesden Theological College.
MR. F. E. HOWARD, Architect; figures carved by MR. ALEC. MILLER.
[This illustration is from the recent exhibition of sculpture and carving by Mr. Alec. Miller at the Twenty-One Gallery.]

From the Twenty-One Gallery.

Detail of Mentmore War Memorial.

By MR. ALEC. MILLER; MR. F. E. HOWARD, Architect.

church in its relation to the function it might perform as a part of some well-considered system of work."

The New Building Wage Claim.

WE were glad to see, in *The Times* last week the letter by Mr. Arthur Keen, Hon. Secretary, Royal Institute of British Architects, in reference to the high cost of building and the proposed further increase of wages. He quotes the Secretary of the London Master Builders' Association that "the cost of building has reached its highest limit, and the industry cannot stand a further increase in wages," and adds that so far as can be judged from the architects' side of the matter, this contention is correct. "The building public are quite prepared to pay a high price, but in most cases they find themselves unable to accept the tenders that they receive, and the work falls through." Proceeding, he says: "In my own experience, the work that has been killed by high prices since, say, the date of the Armistice, is very much greater in amount than that which has been carried out—probably five times as much—and I am constantly hearing from architects that their experience is similar to mine. Further, one knows of very many cases of people who wish to build but who take no steps at all, because they realise that the cost is beyond their means. It seems obvious that ultimately men can only be paid what they earn, and the surest step towards increased wages is the increase of output. The work should either be paid for at piecework rates, or the men should be graded according to their skill and capacity, so as to secure a constant incentive not only to industry, but also to skilful work. It is a strange thing that men of experience and outstanding skill are content to share a flat rate with those who cannot compare with them in actual capacity. At the present time there is the probability of a good deal of unemployment in the near future because the really important work has been abandoned or shelved, but if the encouragement of a greatly increased output were offered to would-be employers there would be full employment for years to come." This is all excellent reasoning, but unfortunately the operatives cannot be got to see or accept it.

The Site for London University.

THE correspondence in reference to the site for the London University is continued with much ability by Mr. A. F. Pollard, who contends that the real and immediate needs of the University are, first, that its administrative centre should be as near as possible to the centre of its constituent schools and colleges; and, secondly, that that centre should form the nucleus of a university quarter capable of impressing its existence and locality upon the public mind. "If the University is to become an expression of London's intellectual life," he says, "it must observe the conditions which dictate every other activity in the capital of the Empire, and concentrate, as business and finance, law and politics have done, not where their votaries sleep, but where they can do their work. If London is to have a university worthy of it, and not a huge secondary school, we cannot divorce it from our centres of research, our homes of learned societies, our hospitals, and our courts of law."

The Victoria and Albert Museum.

WHAT we believe will be considered an interesting scheme for a suggested Guide-book on Architecture for the Victoria and Albert Museum, is outlined by a correspondent on page 250. It will probably be considered much too comprehensive for a guide-book, but, as our correspondent says, it could be compressed at will. It is understood that the suggestions are to come before the authorities when the exigencies of printing make it possible to carry any such proposals into effect.

The Late E. A. Rickards.

IT is with great regret we announce the death of Mr. E. A. Rickards, so well known in the profession, not only as a brilliant architectural draughtsman and caricaturist, but as an architect of exceptional ability. The firm of Messrs. Lanchester, Stewart & Rickards (and since the death of James Stewart, of Lanchester & Rickards) has carried out many well-known public and other buildings, amongst them being Cardiff Town Hall and Law Courts, Hull Art School, Deptford Town Hall, Central Hall, Westminster, and the Third Church of Christ Scientist, all of which have been illustrated in our pages, in which have appeared many striking drawings by the deceased, the last being his design "Nov. xi, 1918" (see our issue for Nov. 15, 1918). The death of such an accomplished artist is a real loss to the profession and to his many friends, to whom he was endeared by his personal charm, his quick sympathy, and his friendly humour. A short notice of his career appears on page 251, together with an appreciation by Prof. C. H. Reilly.

From the Twenty-One Gallery.

Tombstone.

By C. E. MALLOWS and ALEC. MILLER.

GENERAL NEWS.

Highgate School Memorial.

A war memorial is being erected in the forecourt of Highgate School, from the design of Sir Reginald Blomfield, R.A.

Appointment.

Mr. James B. Fulton, A.R.I.B.A., of Streatham, has been appointed Director of Architectural Studies at the Glasgow School of Architecture. Mr. Fulton's design was placed second in the recent Sheffield War Memorial Hall Competition.

R.I.B.A. War Memorial.

The Council of the Royal Institute of British Architects invites subscriptions for the memorial to members of the Institute who lost their lives in the war, which it has been decided to erect on the premises of the Institute. It is requested that in no case should subscriptions exceed one guinea.

The London Society.

Monsieur Autrand, the Prefect of the Seine, has promised that, if circumstances permit, he will come to London in October next to address the members of the London Society on the subject of the recent Paris Town-planning Competition, the premiated designs for which were illustrated and described in our issue for June 18. If M. Autrand is unable to be present, his place will be taken by an authoritative member of his staff.

Obituary.

The *Journal* of the Royal Institute of British Architects announces the death of Mr. Joseph Conder (Fellow), of Tokyo, Japan; Mr. John Johnson (Associate), of London; and Messrs. James Richardson (Licentiate), Henry Blackburn (Associate), Edmund Burke (Licentiate), William Eaton (Associate), F. W. Martin (Licentiate), and Arthur P. H. Pierce (Associate).

It is reported that Mr. J. M. Solomon, the architect of the Cape Town University, has been found dead at Cape Town with a revolver wound.

R.I.B.A. Standing Committees.

In accordance with by-law 51, the Council of the Royal Institute of British Architects has made the following appointments to Standing Committees:—

Art.—Sir Edwin Lutyens, R.A. (*F.*), and Messrs. H. V. Lanchester (*F.*), J. D. Coleridge (*F.*), Alfred Cox (*F.*), and F. R. Hiorns (*A.*).

Literature.—Messrs. Harry Barnes, M.P. (*F.*), Theodore Fyfe (*F.*), T. S. Attlee (*A.*), Miss Ethel Charles (*A.*), and Mr. C. E. Sayer (*A.*).

Practice.—Messrs. Arthur Keen (*F.*), G. Topham Forrest (*F.*), Delissa Joseph (*F.*), Herbert A. Satchell (*F.*), and Herbert A. Welch (*A.*).

Science.—Sir Charles Ruthven, O.B.E. (*F.*) and Messrs. Arthur Ashbridge (*F.*), R. Stephen Ayling (*F.*), Felix Clay (*F.*), W. E. Riley (*F.*), R. J. Angel, M.Inst.C.E. (*A.*), Michael Waterhouse (*A.*), and Charles Woodward (*A.*).

The Threatened City Churches.

A number of the City of London clergy have addressed a letter to the Bishop of London regarding the proposed demolition of nineteen of the City churches. The financial policy of the Commission is unreservedly condemned, and the letter expresses the opinion that the threatened churches are irreplaceable. It is suggested that none of them should be destroyed until the question has been considered as a whole, and each individual church examined in its relation to the function it might perform as part of a well-considered scheme of work. It is suggested that a permanent commission should be appointed to administer all surplus City church funds, and that there should be a large amalgamation of the parishes. A dozen churches open in the City on Sundays are stated to be sufficient, but this reduction in the number of parishes need not mean the demolition of the churches, which might be linked up with mission districts in the suburbs.

Theatre Sanitation.

The Minister of Health has issued a circular to local authorities stating that numerous complaints have recently been addressed to him respecting the unsatisfactory sanitary conditions, more especially in the accommodation for the artists and staff employed, which obtain in theatres and music-halls in different parts of the country. The Ministry suggests that arrangements should be made by the sanitary authorities for all theatres, music-halls, and other places of public entertainment in their district to be visited periodically by inspectors of nuisances, who should report, both to their authorities and to the licensing authority, any cases in which the conditions are found to be unsatisfactory. The Secretary of State is suggesting to the licensing authorities that, where any such report is received by them, it should be taken into consideration when the licence comes up for renewal.

COMPETITION NEWS.

Peterborough.

The award of Mr. Edwin T. Hall, F.R.I.B.A., the assessor in the Peterborough and District War Memorial Infirmary Competition, is as follows:—

Design placed first.—Mr. Wallace Marchment, London.

Design placed second.—Messrs. Kenyon and Livock and Ayling and Bowring.

Design placed third.—Mr. Horace Cubitt, London.

Johannesburg.

The design accepted for the new University Buildings, Johannesburg, is that of Mr. Frank Emley, F.R.I.B.A., of Trust Buildings, Fox-street, Johannesburg.

Burton-on-Trent.

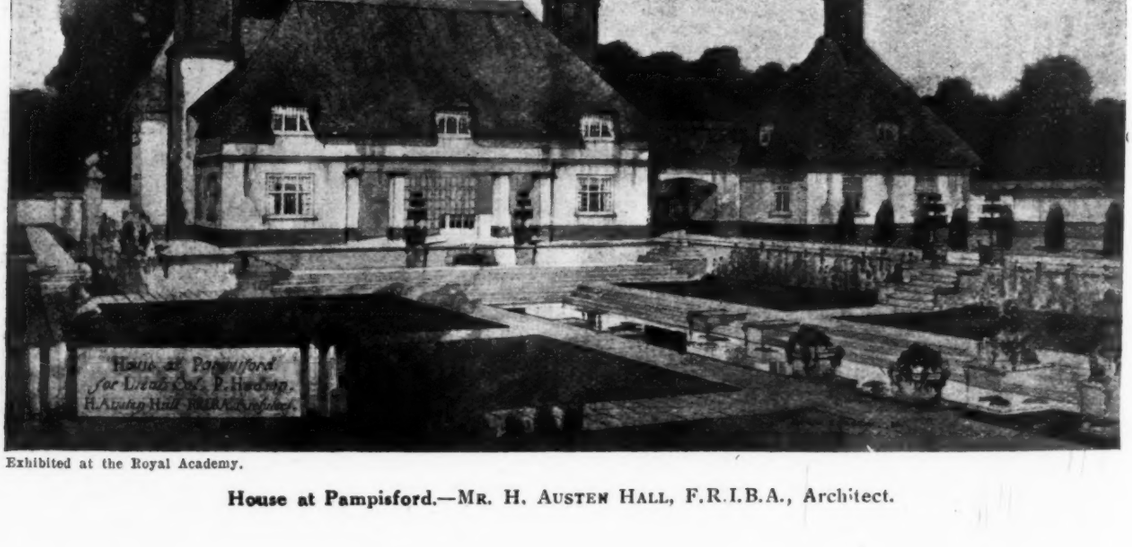
For the Governors of the Burton-on-Trent Endowed Schools.—Design for a high school for girls. Names of intending competitors to be sent in by September 6. (See our issue for August 27.)

Lille.

For the Municipality.—Designs from architects of French and Allied nationalities for reconstructing and beautifying the city. The premiums offered total 128,000 francs, in sums of from 30,000 to 3,000 francs. The entrance fee is 300 francs. Sending-in day, October 15. Further particulars from the *Direction des Travaux Municipaux*, Town Hall, Lille.

York Minster.

Designs for a war memorial to officers and men of the K.O.Y.L.I. Sending-in day, September 14. (See our issue for July 30.)



Exhibited at the Royal Academy.

House at Pampisford.—Mr. H. Austen Hall, F.R.I.B.A., Architect.

PETERBOROUGH AND DISTRICT WAR MEMORIAL INFIRMARY COMPETITION.

WHAT is "rigid economy"? The answer to this question can, apparently, be interpreted in a very varied manner, for in this competition the estimated cost of the 29 designs submitted varies from £67,000 to £270,000 based on an average cost of about 2s. 6d. per foot cube. (Note: This cube basis varies from 1s. 6d. to 3s. in the various schemes). The promoters of this competition in their original conditions make no reference to any limitation as to cost, and it is from an answer to a competitor's query, "is rigid economy essential?" that one learns from the assessor that "economy will form an element for the greatest consideration in the adjudication."

The result of this competition seems to emphasise the advisability of including in the conditions some limit as to expenditure; for, instead of the promoters having the advantage of the assessor's decision on the best design in plan and elevation out of some 30 schemes, the choice has been limited to a bare half-a-dozen competitors, who have rightly interpreted the meaning of "rigid economy." For instance, one feels that, had there been a definite limitation of cost, the author of No. 14 would have reproduced in a less costly scheme sufficient of that individuality and good proportion which is evident in the very costly design submitted, to have surpassed the rather mediocre character of the exterior treatment of the winning design. And this leads one to the conclusion that the present boom in some quarters of the architectural profession has been the cause of the comparatively few entries, and also of the rather poor quality of the majority of the designs submitted; which all points to the fact that competitions as a rule are somewhat unsatisfactory in results.

The schemes as a whole can be divided into two classes: (*a*) two-storied buildings with three wards on each floor, and (*b*) three-storied buildings with two wards on each floor. The latter type undoubtedly permits of a more imposing elevation to the main road, which bounds the south end of the site, but it does not produce such a satisfactory plan. The two-storied types are of three varieties: (1) The irregular plan; (2) the administrative block parallel to the Midland-road (*i.e.*, the subsidiary road) with the wards planned at an angle, with their axes running from S.W. to N.E. (of the reason for this we must confess our ignorance, though there are some six or seven designs of this type); and (3) the whole of the buildings parallel to Midland-road with the wards to the South (*i.e.*, at the Thorpe-road, or main road, end). The winning designs are all of this latter type, which appears to be decidedly the most suitable for the site.

The design placed first, by Mr. Wallace Marchment is undoubtedly the best plan submitted. The blocks are well grouped, with a view to reducing corridors and saving labour and heating. The sanitary blocks to the wards are placed at the service end, *i.e.*, near the kitchens; this is apparently the latest idea, but rumour says that it does not work so well in practice as isolated pavilions on the angles of the far ends of the wards. The administrative block and out-patients' block are well planned, though the recovery room in the latter is lighted only by a skylight; in the former the accommodation for the porter is on the small side. The nurses' hostel is well treated in plan and elevation, and, owing to its three stories, has an imposing appearance compared with the administrative block. A fault which can be modified is the placing of the boiler-room under the kitchens without any exterior means of access, and it is possible that difficulty may be encountered owing to the varying nature of the subsoil of Peterborough. The elevations are quiet, and show good taste, but they do not evince the same masterly handling of the difficulties as is seen in the planning. The materials are chiefly brick with some stucco and pantiled roofs to balconies, administrative block, &c. The cost is estimated at £80,822, at 2s. 6d. per foot cube.

The design placed second, by Messrs. Kenyon & Livock and Aylwin & Bowring, covers much more ground, and, though well planned in detail and fulfilling the conditions accurately, is extravagant in corridors. The external treatment is all of brick, with pantiled roofs except to the wards, which are flat, and the cost is estimated at £97,000 at 2s. 8d. per foot cube (or about £10,000 more than the design placed first on the same basis per foot cube).

The design by Mr. Horace Cubitt, placed third, is more akin to Mr. Marchment's in general arrangement, but is rather too scattered. The elevations are simply but ably treated in the "Georgian" manner, and show more ability in this than either the first or second designs; the estimated cost is £102,000, at 2s. 9d. per foot cube (*i.e.*, about £10,000 more than the winning design on the same basis per foot cube.)

It is a pity that the promoters should have limited the exhibition of these drawings to the public to a period of two hours at very short notice, as the plans are worthy of more detailed study than time would allow. Of the other designs, No. 8 is an interesting and well-drawn and coloured plan with the buildings around a large courtyard. No. 17 has an excellent exterior treatment and fair plan, but is too costly (£170,000), and the same remarks apply to No. 26, whilst the draughtsmanship and exterior design of No. 14 (except for one or two minor details) is far above the remainder, not excluding the winning design, but the scheme is so costly as to preclude the possibility of its serious consideration.

CORRESPONDENCE.

Preservation of Stone for Westminster Abbey.

SIR,—May I be allowed to add a few remarks on the interesting discussion which appears in your issue for August 20 on the question of the best stone to select for Westminster Abbey? To my mind the problem is not one of selecting between a limestone and sandstone, as sandstones vary so much in the nature of the cementing material by which the grains of quartz are held together, but of selecting a limestone and a suitable sandstone in which the binding material between the grains is secondary quartz. It is, of course, perfectly well known that a limestone is bound to be attacked by the gases present in the air of a large city which are due to the oxidation of the sulphur present in coal, and, therefore, that they are bound ultimately to perish, though the rate of attack for some unknown reason varies very much with different limestones; but it must be remembered that the grains of quartz in many sandstones are cemented together by calcite, the same substance of which limestone is composed, and, therefore, that such a sandstone may be expected to perish more rapidly in the London atmosphere than a limestone, as it is only necessary for the small proportion of calcite acting as a binding material to be dissolved for the whole stone to disintegrate and crumble away. On the other hand, there are many sandstones of which the binding material is secondary quartz, and such stones, one would imagine, would resist the chemical action of the London air and, therefore, suffer only from mechanical disintegration.

A microscopical examination of the various sandstones to be found in London buildings with a view to determining the nature of the binding material, with observations as to their rate of decay, should reveal some very interesting facts. In the case of many of our Scotch sandstones quartz is the binding material, and they are able to resist a chemical attack; but the amount of binding material varies considerably. In some cases where the quartz grains are merely held together at certain points, the stone is apt to yield to mechanical disintegration such as the action of frost.

Professor Lethaby's suggestion of limewashing the stone should, one would imagine, do a great deal to protect the stone from the action of the oxidised sulphur gases if the stone forms part of a watertight building, and is protected from the entrance of water from above, below or behind. The surface coating of a stone in a ruined building, for instance, or in the case of a cornice where water can enter from above, is of very questionable value, as it seems rather to promote than to diminish disintegration. Still more care has to be exercised in the use of anything of the nature of a waterproofing material, as, owing to capillary conditions, such materials are apt to stay in the surface layer, and, as they are not absolutely waterproof, any moisture which gets in behind dissolves the stone to a certain extent, and the products of solution crystallise out behind the thin waterproofing layer and produce scaling and disintegration.

I should occupy, however, too much of your space if I dealt with this question of the use of stone preservatives at any length, and would, therefore, conclude by repeating my original suggestion: that an examination of the various sandstones to be found in London building should be undertaken, and that in each case a careful microscopical examination should be made of the cementing material holding together the particles of quartz.

A. P. LAURIE.

Heriot-Watt College, Edinburgh.

BOOK.

Timbers and their Uses. By WREN WINN. London: G. Routledge & Sons. Price 10s. 6d. net.

Timber is in such demand at the present time and the variety and quality in use is so variable, that a new work on this subject dealing generally with woods from all countries can hardly fail to be valuable. Users of timber are usually conservative people, no doubt largely because the many varieties of woods provided by nature are really so little known outside their own immediate localities; but necessity is a great incentive to knowledge, and as transport becomes easier there is little doubt that many woods from distant lands will find their way into this country. The author has arranged his work in a practical manner. Chapter I deals with the uses of woods, those suitable for bridge work, building, cabinet work and so on, being grouped under these headings in alphabetical order, a short description of qualities being given. Thus, we read under "English Elm": "Coarse, open grained, liable to shrink and warp, but durable." The botanical and alternative popular names are also given, which, with our very loose nomenclature, is of great assistance. The above particulars occupy nearly one-third of the volume. A short chapter follows dealing with geographical distribution, wherein the trees of the different continents are tabulated with their popular and botanical names only. Chapter III gives in twenty pages a very valuable account of insect pests in timber, and after perusing the horrible depredations of these various creatures, we almost wonder that there is any timber left to tell the tale. The user of converted timber will, however, be more interested in the succeeding chapter dealing with fungoid growths, in which we think that *merulius lacrymans* is infamous enough to deserve more than a page and a half. A few pages on accidents during growth are followed by a long account, which should be particularly valuable at the present time, of the world's resources. We read that 2,965,000 acres, or only 4 per cent., of Great Britain is woodland, and our feudal kings are given a terrible character for the destruction of forest lands. India possesses 75 million, and Australasia no less than 205 million acres of forests, and we may hope to see these woods from our own Empire more widely used at home in years to come. A chapter on manufactures, particularly wood pulp, is followed by some account of structure and seasoning. The volume concludes with a short chapter on testing timber.

THE VICTORIA AND ALBERT MUSEUM.

A SUGGESTED GUIDE-BOOK ON ARCHITECTURE.

THE following outline scheme for a suggested Guide-Book on Architecture has been tentatively drawn up by a correspondent—Mr. H. Molesworth Roberts—on certain principles given below. It was submitted to the authorities some time ago, and (it is understood) is again to come more seriously before them when the exigencies of printing make it possible.

The aim of the scheme may be thus summarised: First, no handbook yet exists at this Museum on the subject of the mother-art of architecture, vital as it is to students of those many other arts and crafts of which it is the framework, and this gap in literature should, if possible, be filled. Secondly, those books which have already been published by the Museum on other subjects are for the most part of the nature of catalogues, or are highly specialised, and are thus too narrow for general instruction and also too dry and technical to be acceptable to the public at large. The British Museum has struck a happy and successful note in this respect; and the Victoria and Albert Museum, as the national art collection, should not be left behind.

It may be considered essential, therefore, that if and when such a work on architecture is prepared, it shall be broader in scope and of a more popular nature, calculated to arouse the interest of amateurs and yet give much condensed instruction of a more practical nature for the purposes of more serious students. Mere conventional dry facts in connection with each exhibit—such as exact date, name of little-known craftsman and name of person associated or commemorated—might well be avoided, and features of a more interesting character should instead be described—as the "style" or type of design, the movement or influences which it reflects, the meaning of the structural forms, and the craftsmanship applied to it.

Such a book, to fulfil its highest purpose, should give not a mere list of Museum exhibits, but should use the latter as a vehicle or opportunity for a general "text-book" of the subject, the exhibits—as in the British Museum guides—being quoted merely in an illustrative way. It would, however, be very helpful if as many as possible of the sections of the subject-matter were worked up in the form of imaginary "tours" round the Museum galleries—thus avoiding either extreme and combining the two aims in a really helpful and, perhaps, model guide-book.

The gist of the submitted scheme may be briefly given. The general scope of the subject—its definitions, divisions and possibilities—could be treated in the first section. First, its relation to the arts and crafts, its superiority over merely "imitative" arts, and its capacity as both a science and art, could be dealt with. Its varying aspects—structural, æsthetic and historical—could then be outlined, as also its influence on home life and the way in which it enters into the lives of so many branches of the community—historical students, geometers, poets and the clergy, as well as the more professional classes of surveyors, valuers and engineers. The difference of treatment arising from the varying uses to which buildings are put—domestic, palatial, memorial, civic, and for worship—could be here sketched out, and this could form one "tour."

The uses of the study of architecture merit a small section to themselves. The æsthetic appeal would be dwelt on, as also the romance of ruins and their lessons for the literary worker, especially as a setting for the dramas of the past. A note on the correct use of historical architecture could here be most fitly added, as also some remarks on originality and its proper place in creative art.

Under the heading, "means of study," would come, first, a note on the existing methods in the training of students; and, second, the study of ancient remains, the value of travel, and the methods employed to diagnose the date and system of construction; the province of imagination; how to prepare "restored" drawings of the probable original state of a building; excavations; the value of museums; all these should be tersely discussed. A few remarks on the rights and wrongs of the restoration of ancient relics would not be out of place. Then a further aspect must be noticed; architectural literature could be summarised and the different ways of dealing with the subject adopted in various text-books might be contrasted.

The third section could well be devoted to the Museum itself; its national purpose should be dwelt upon, the arrangement of the architectural collections outlined, and a suggested general tour here given for the benefit of the visitor. The "architectural index," or corridor systematically giving views and drawings of typical examples of the successive historical styles, should be specially noticed, and an illustrative "tour," embodying a sketch of the evolution of architecture through the past, could be advantageously devoted to it. The Victoria and Albert Museum Art Library could here be duly appreciated and its arrangement, scope and catalogues briefly explained. Other factors—models, photographs and measured drawings, as represented in the Museum—could be mentioned. A note on the art of the guide-book, too, would be suggestive.

The next section would be best entitled "The Architecture of the Past," and a further one, "The Architecture of the Present"; by these terms, the two would be brought into intimate relationship and the old chasm separating the conventional "History" and "Design" would be avoided. Between them could be inserted a useful chapter dealing with both, viz., on the analysis of buildings, their construction, their features arising therefrom, and their decoration. In the fourth section, then, dealing with the architecture of the past, the origins would be first discussed, and it would be explained how architecture gradually rose from the mists of antiquity and evolved itself step by step into a noble and expressive art. The influence of material upon the various structural systems would be briefly worked out, as also the decorative schemes arising from them, and the chief distinctions between the styles of the different nations of the ancient world would be described. A general outline, on easy popular lines, of the growth of the successive styles, treated as a connected evolution, would follow; special stress being laid upon transitional stages; a note on how to marshal different and conflicting theories (as on the origins of the Greek "orders"), and some remarks on the subject of the criticism of ancient works, would be of interest.

The fifth section, on analysis of buildings, is better placed here because it gives us inferences from the work of the past and then serves as material for the remarks on modern art following. It would embrace both past and present work, and would be not only of interest but of great practical assistance to structural and other students. The vertical growth and construction of a building, for instance, should be considered in relation to its plan. For elementary purposes, the differences between the use of the chief terms (*e.g.*, post, pier, pillar, column), easily illustrated by the Museum collections, could with much advantage be pithily described. All features should be considered in order, according to their origin and primary intention; and the methods adopted by different peoples in their respective periods and countries could all be collected as resources for new work. The influence of roof on structure and of the latter on plan and decoration could be taken as the basis of this systematic scheme. The static principles of different types of construction should be summarised; and the methods employed in the actual putting up of buildings should not be overlooked. Planning itself could be dealt with on interesting lines. A note on town-planning and its aims would here naturally follow. Museum "tours" could be devised for most of the respective subjects or features thus treated, for each of which ample examples can be indicated.

A suggestive chapter on the architecture of the present would form the last section of the work. An outline should be given of the growth of ideas during the previous and present centuries, and of the tendencies shown by the current works and literature. The character of the art of the different nations of Western Europe could be noticed in relation to our own. The present-day position of the art, a review of the new structural resources of steel and concrete, and of the value of past efforts—summarised for this purpose in the preceding chapter—would be given.

It would, doubtless, also be useful to many readers to give a short outline of the means of entering the profession, and a note on what is involved by the practice thereof, for the benefit of aspirants; and the relation of architects to members of the allied professions of surveying, building and engineering would follow.

A helpful sketch of the aims which should control future work, the necessity for perfect honesty and fitness in construction, and of good massing, proportions and restrained simplicity of design, would form a fit ending to the book.

Such is the nature of the general arrangement of the suggested publication. It will, perhaps, be argued that such a scheme is much too broad and beyond the nature of a guide-book; but the generalised sections given above could be compressed at will, and would occupy but small compass in relation to the whole book, which could, moreover, be kept within easy reach of the popular purse. Such points have been here dwelt on in some detail merely to show the possibilities of a publication expanded beyond mere catalogue standard.

PRESERVATION OF STONE.

AT the meeting of the British Association for the Advancement of Science at Cardiff last week, Mr. J. S. Owens addressed the Chemical Section on the effect of impurities in the air on the corrosion of stone. A great difficulty in investigations, he said, was due to the minute quantities of the impurities, which made it almost impossible to obtain enough for analysis. There were also very great differences in the amounts of impurity at different times and places. A distinction had to be drawn between the comparatively large particles of actual soot which fell down like rain, and the extremely fine, possibly colloidal, state of impurities which were found in the air of rooms, and could not be washed out of the air by rain or removed by ordinary filtration. It was the latter which caused most of the corrosion of stone. Experiments conducted on a very large scale at Manchester showed that there was about 16 lb. in the volume of air which would cover an area of a square mile 10 ft. in depth. The air in Westminster was that of an Alpine peak compared with the air in Sheffield. Examination of the latter was given up—possibly, it was suggested, to save the reputation of the city. The most probable nature of the chemical impurities was sulphuric acid, ammonia, or chlorine. Actually, however, it was found that the quantity of sulphurous or sulphuric acids or sulphates was always very much greater than that of ammonia or hydrochloric acid. Experiments had acquitted both hydrochloric acid and ammonia from any large share in the corrosion of stone. It seemed that sulphur was to blame, the chief source being impurities in gas and the smoke from domestic coal. In dark and foggy weather the sulphur was occasionally in the form of sulphurous acid, but in the presence of daylight this was rapidly oxydised to sulphuric acid. It was found that sulphuric acid did not corrode limestone quickly, but it combined with other substances in the dust of the air to form sulphates, perhaps most often sulphate of ammonia, and it was the sulphates which had the fatal action on limestones.

THE LATE E. A. RICKARDS.

WE regret to record the death of Mr. Edwin Alfred Rickards, F.R.I.B.A., formerly a member of Council of the Institute, who was born in 1872. On entering the profession he gained his experience in various London offices, assisting, among others, Messrs. Dunn & Watson, George Sherrin, and Leonard Stokes. He joined Mr. H. V. Lanchester and the late James Stewart in 1897, and with them carried out Cardiff Town Hall and Law Courts, Deptford Town Hall, and Hull Art School. His principal later works (in conjunction with Mr. Lanchester) were the Central Hall, Westminster, the Third Church of Christ Scientist, Curzon-street, Cold Overton Hall, and business premises for Colnaghi & Obach, Bond-street, and for Bovril, Ltd., Bunhill-row. In 1916 he volunteered for military service, was invalided home after three months in France, and continued on home service till he became seriously ill in April, 1919. During this period he took an active part in the planning of the Motor Transport Works at Cippenham, Slough, prior to its being handed over to the Royal Engineers. He also prepared a striking design for the Canadian War Memorial. Mr. Rickards was well known in artistic circles as a skilful draughtsman in water colour and as a very brilliant caricaturist. He spent a large portion of his life in Chelsea. During his last illness he was mainly at the Home Sanatorium, West Southbourne, near Bournemouth, where he died on Sunday, August 29.

An Appreciation.

The news of the death of E. A. Rickards came as a great shock. The toll of the war is inexhaustible. I saw him at Southbourne on Tuesday last week, when he seemed to be recovering from a slight chill. The complaint he had contracted from exposure in France had been bravely fought, and the sort of victory, at any rate, that a long war brings seemed within his grasp. He was full of plans for the future, and had taken a house near London, to which he was moving next month. He was to meet his friends and take up his work again. It is unbelieveable that he is now dead.

It is more than that. His loss is a disaster. He was the most vital man in architecture in his period. Any of those who are between forty and fifty, and have mixed at all in architectural affairs in London, must at some time or other have come under the influence of his extraordinarily vivid personality and have been provoked and stimulated thereby. Twenty-five years ago, fresh from the laurels of the Cardiff competition, he was the young man of achievement and renown whom all were anxious to know. He was the Augustus John of our profession, vigorous and disturbing. Those were the days of little orders and timid detail. Into such he came with his big-scale, full-blown baroque. He made monuments where others were designing wall patterns. He was inexhaustible in ideas, rich and profuse in the presentation of them. His drawings were as exciting as his personality. To meet him once or occasionally was to ensure a fierce argument. To know him at all intimately was to entertain a very deep affection for him. Like all thorough artists, there was something childlike and appealing in his nature, a call for sympathy and understanding, a keen desire to know how his work affected you, which was very human and attractive.

All this was twenty years ago. In the interval I had met him occasionally, and occasionally corresponded with him. Last month I saw him almost daily. In spirit he had not altered at all, hardly in externals. He was still the same inexhaustible talker, with the same vivid interest in life, the same combative nature. He was hard at work on a series of sketches, among them ideas for a large fountain as a war memorial to be erected in front of the Cardiff Town Hall, for which a commission had been given to Sir Thomas Brock. He had again taken up water-colour drawing, and with a new interest. He had made discoveries, and could out-Walcot Walcot. Indeed, the sketches I saw were more on the plane of Brabazon. Some were for his forthcoming book, the great collection of his multitudinous drawings, which is about to be published. A wider public will then see what a versatile draughtsman he was. Few people at present realise, for instance, that the most delicate drawings of the Russian ballet, made to illustrate an article of Mr. Arnold Bennet's in pre-war days, are by the same hand we all know in his vigorous architectural perspectives.

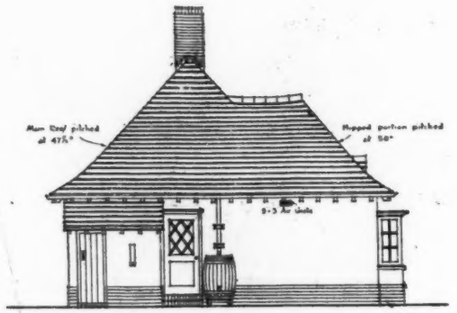
As to his building work, it is familiar to us all. Some love it, some hate it, none can be indifferent. It is profitless in the case of so perfect a partnership as his to attempt an estimate of his share. He would be the last to desire it. But his drawings and his design—made while still in the Army—for the Imperial Canadian War Museum are proof of the peculiarly sculpturesque character of his work—the true essence of the baroque. When designing I should judge he saw his work in the solid more than most architects. His facility with perspective ensured this. His work always had a monumental quality and unity which his many sculptor friends appreciated. He was an architect other artists were glad to work with. His feeling for decoration was intense. Think of the rich quality of the façades of Cardiff and Deptford Town Halls, and the ornament on the lower portion of the Westminster building. There was an individual quality in his detail which few architects outside the great Italians have achieved. There is nothing sudden or unrelated in it, it is always expressive and harmonious. Largely self-taught, though, I believe, influenced in early life by the late Mr. Flockhart, in whose office he worked as a young man, he had not the advantage of belonging to a group or school, yet his work had a consistency and character which is unmistakeable. It lasted, too, over 25 years of a very full life. He enjoyed his work, as every creative artist must, up to the hilt. Last week he told me the happiest hours of his life—and he had tasted many pleasures, had travelled much, loved and understood music as few can—had been the hours spent with his partner in evolving the monumental schemes they have submitted in all the great competitions of our time. For these and much more we all are and must remain his debtors.

C. H. REILLY.

Liverpool.

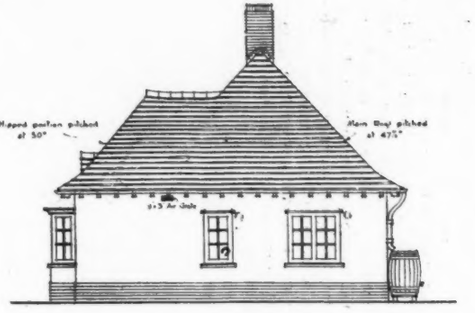
Proposed Hendon War Memorial.—By Mr. G. HORNBLOWER, F.R.I.B.A, Architect.

[This proposed memorial is a design by Mr. George Hornblower, F.R.I.B.A., and will be erected, it is hoped, at the junction of Colindeep-lane and Station-road, Hendon, the latter being one of the main roads through the district. The memorial will be 25 ft. in height, and on the panels will be inscribed the names of the fallen. The Celtic Sword will be engraved on the stone and the panels will be in bronze. The Committee considers that the cost will be from £500 to £600. The War Memorial Committee, of which Colonel F. W. Hearn is Chairman, hopes that it will be possible for the monument to be erected by the anniversary of Armistice Day.]



·WEST ELEVATION·

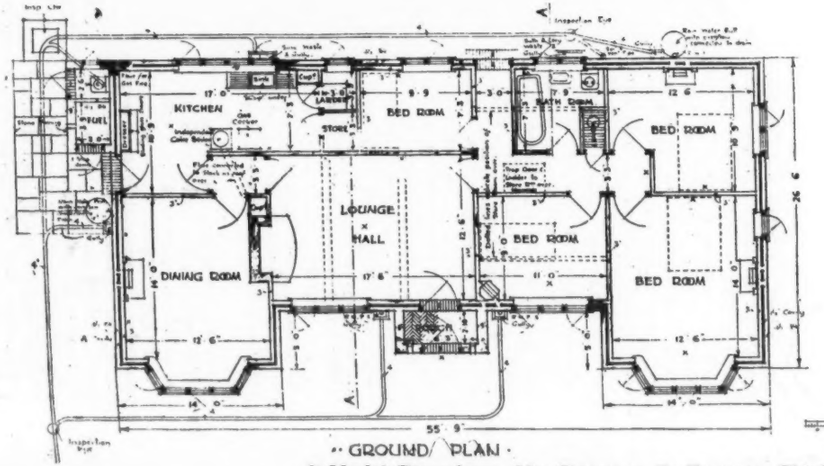
·PROPOSED BUNGALOW·
·AT·YARDLEY·BIRMINGHAM·



·EAST ELEVATION·

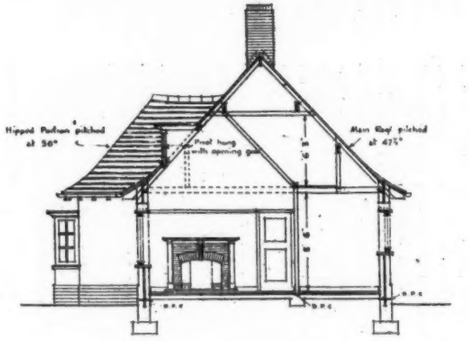
·SOUTH ELEVATION·

·NORTH ELEVATION·



·GROUND PLAN·

Note. Drainage to be traced to final position of House on Site.



·SECTION A-A·

Scale of Feet

A Model Bungalow. Mr. DOUGLAS G. TANNER, Chief Architect, Housing Region "E." (See p. 253.)

Leading Contents.

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ILLUSTRATIONS

New Premises for Wolseley Motors, Ltd.

The perspective view of this building (situated in Piccadilly and Arlington-street) was made by Mr. W. Godwin, and the drawing was hung in the Architectural Room at this year's Royal Academy Exhibition. The ground floor is to be used as a showroom for motor-cars, and the upper floors as offices. The builders are Messrs. William Cubitt & Co., and the architect Mr. W. Curtis Green, F.R.I.B.A.

New Offices at Grays for the Tunnel Portland Cement Co.

The reproduction is made from Mr. Curtis Green's drawing exhibited in this year's Royal Academy Exhibition. The Tunnel Portland Cement Co. wished to illustrate the uses to which concrete blocks could be put; the ground floor walls, all the window and door dressings, and the main cornice are of blocks made with granite aggregate, and the remainder of the walling with crushed Portland stone aggregate.

Gainsborough Housing Scheme.

The satisfactory lay-out of the Gainsborough Urban District Council housing site was made difficult by the somewhat steeply rising ground and the fact that the main road north and south was fixed; also by the small roads for access from the west. It was further complicated by the reserved strip around three sides of the site, and the fact that Spital Hill is much above the level of the adjoining ground. There was also an inadequate water supply. The scheme provides for 226 houses. Mr. E. G. Allen, F.R.I.B.A., M.T.P.I., of 4, Arundel-street, W.C. 2, is the architect.

A MODEL BUNGALOW.

THE difficulties of finding house accommodation in and about Birmingham, as well as elsewhere, are by no means confined to the working classes; and at Birmingham they have been severely felt by, among others, the Housing Commissioner's staff for that Region, and many members of that staff, recruited from other parts of the country, have been compelled to seek accommodation in boarding-houses or furnished houses at very high rentals. The increase in the amount of the grant offered by the Government to the private house-builder offered them an opportunity at once of securing houses for themselves and of giving a practical demonstration of what it is possible to achieve with the aid of this grant.

The first step was the preparation of suitable plans, and after due consideration it was decided that the bungalow type, in view of its low cost, convenience and attractive appearance, was the most suitable for the purpose. The term bungalow frequently conveys the idea of a timber-frame building covered with weather-board and roofed with felt, making a draughty and generally uncomfortable house of a temporary nature. This is quite a mistaken idea. Bungalows, if properly constructed and planned, are even more comfortable, convenient and easily worked than the orthodox two-story house.

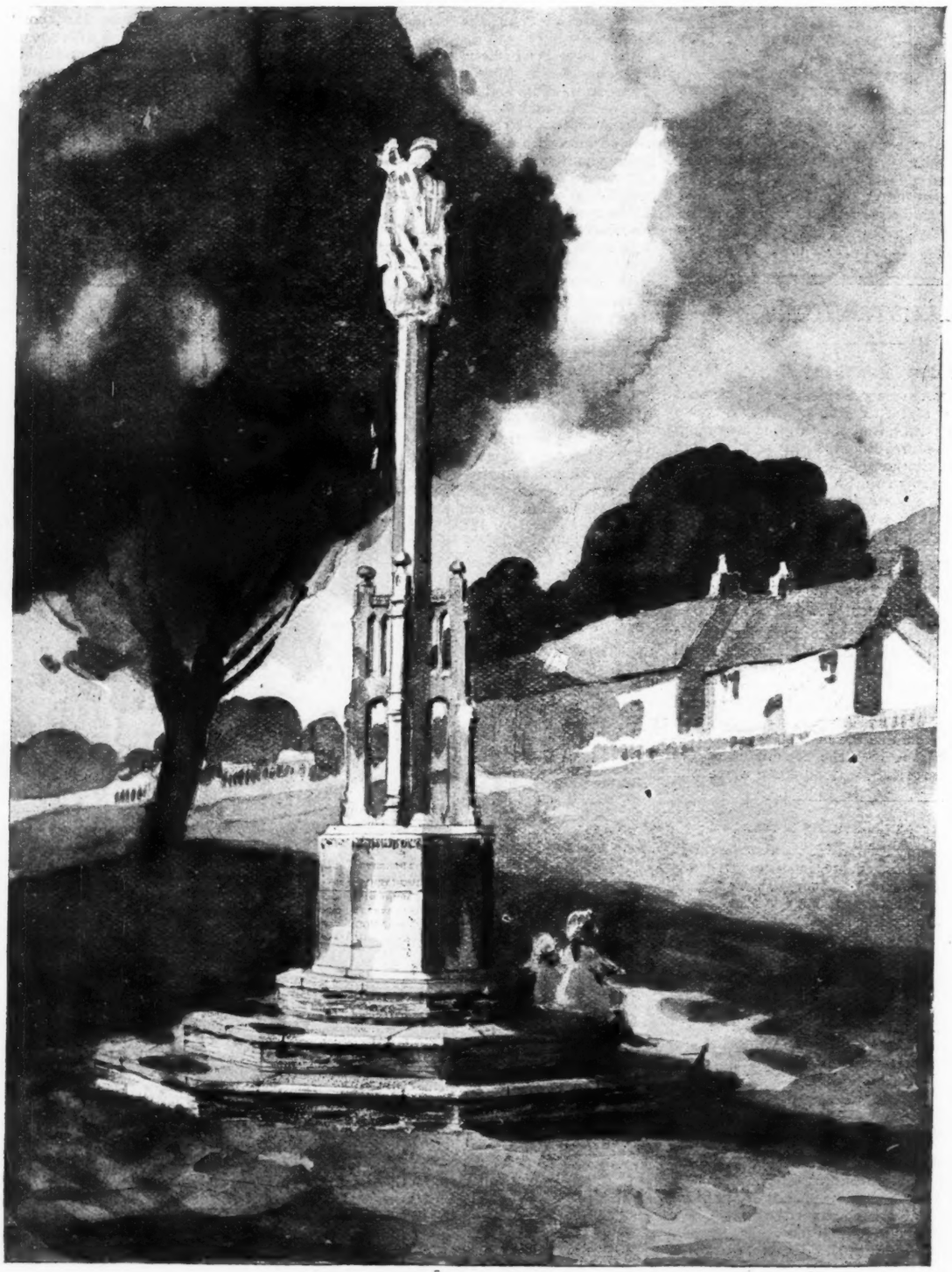
Sites have been selected for the erection of these bungalows (illustrations of which are given on p. 252), and estimates secured, and after negotiations by Mr. D. G. Tanner, the Chief Architect of the Region, a contract was entered into with Messrs. A. Francis & Co., of Birmingham, at the rate of £940 each, plus the Government subsidy; this sum includes the installation of gas and water, connecting drains to the main sewer, making paths and finishing the house ready for occupation. Each bungalow is to be built on about a quarter of an acre of ground, and the method of construction consists of an external 4½ in. brick wall separated by a 1½ in. cavity from the internal facing of 3 in. breeze blocks. Both bricks and blocks are set in cement, and the whole of the internal walls and ceilings are of brindled bricks, the upper part of the walls being roughcast and the roof tiled.

A wide porch leads into the lounge hall, which is a prominent feature of the design. It is 17 ft. 6 in. in length by 12 ft. 6 in. in width, and 16 ft. high, and it is treated in the Jacobean style, with oak king-posts, stone fireplace and "minstrels' gallery." Leading out of the lounge is the dining-room, measuring 16 ft. 6 in. (inclusive of bay) by 12 ft. 6 in. The ceiling is barrelled, giving a height of 11 ft. The dining-room is connected by a convenient serving passage with the kitchen. The kitchen is divided into two, one portion forming a comfortable sitting-room for the domestic help, while the other is the working kitchen proper. In the former, convenient to the dining-room, is a dresser with drawers for plate and silver, and glass-fronted cupboards for china and glass.

Free use is made in the main kitchen of labour-saving devices, the room being fitted with a gas-cooker, sink with two draining boards and cupboards under, store-cupboards, &c., and an independent slow-combustion boiler, supplying constant hot water to the sink, the bath-room, the lavatory, and a radiator in the lounge hall. A larder fitted with slate shelves opens out of the kitchen. The bedrooms are grouped at one end of the house, measuring 16 ft. 6 in. by 12 ft. 6 in., 12 ft. 6in. by 10 ft. 9 in., 11 ft. by 9 ft., and 9 ft. 9 in. by 7 ft. 3 in., and all 8 ft. 6 in. high. The bathroom contains a 5 ft. 6 in. bath, 20 in. lavatory basin, and w.c., and the hot water from the boiler heats a towel-rail in the bathroom and a linen cupboard just outside it. Accommodation for storage can be obtained in the roof, with a headroom of about 6 ft. 3 in., and a dormer window gives light to this roof-space.

Only one chimney-stack is provided, serving the open fireplace in the lounge-hall and the independent boiler. The remainder of the house is heated by gas fires, the necessary air being introduced direct from outside the building and the products of combustion carried off in special 9 in. by 3 in. flues, concealed in the cavity of the wall and terminating in special ventilators, made by Messrs. Thomas Ash & Co., under the eaves. The result is both to reduce the cost of building and to increase the attractiveness of the elevation.

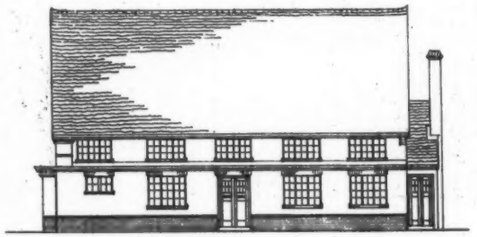
Gainsborough Housing Scheme Lay-out.
MR. E. G. ALLEN, F.R.I.B.A., Architect.



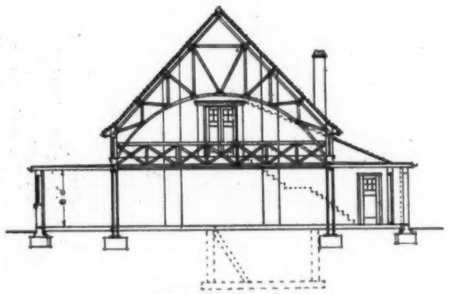
War Memorial at Northiam, Sussex.—MR. E. GUY DAWBER, F.R.I.B.A., Architect.

ALL SAINTS, BENHILTON, PARISH HALL

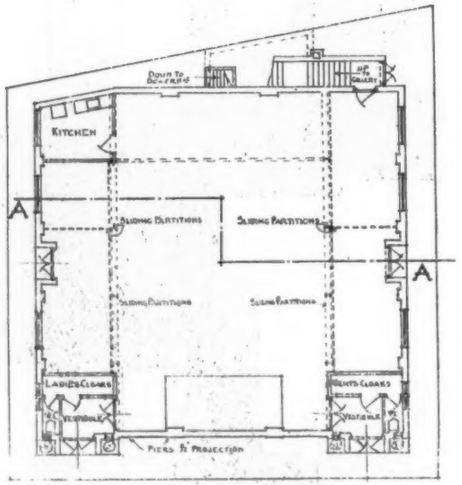
Scale 1in. to 8ft.



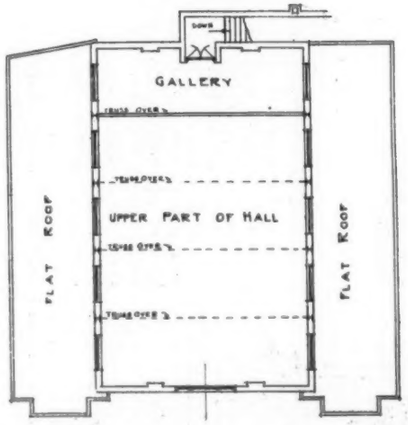
SIDE ELEVATION



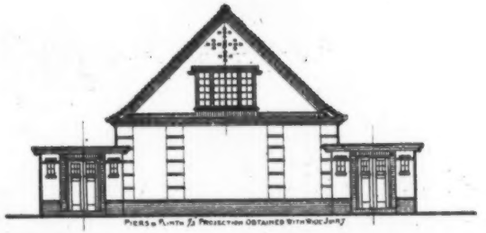
SECTION AA



GROUND FLOOR PLAN



FIRST FLOOR PLAN



FRONT ELEVATION

H D SEARLES-WOOD, F.R.I.B.A.
ARCHITECT
157 WOOL EXCHANGE, E.C.

[This building is for social work in the parish. When the partitions are folded back an audience of 200 can be assembled, and the vestibules used as dressing-rooms for stage plays. The partitions also enable the hall to be divided into five rooms for ordinary class work. The estimated cost is £4,783. Mr. H. D. Searles-Wood, F.R.I.B.A., is the architect.]

GREEK AFTERNOONS AT THE BRITISH MUSEUM—IX.

By W. R. LETHABY.

The Mausoleum.

IN 1908 I made a little study of this the King of Tombs and showed that:—(1) The steps of the pyramid were wider in the direction of the length of the monument in a proportion which agreed with the dimensions of the foundation and with the recorded number of columns, and that this settled the plan of the structure. Such a scheme had been adopted by the excavators and others, but the full force of the evidence had not been brought out and it had been overlaid by other theories. (2) Of the various dimensions proposed for the columniation of the order, 9 ft. 9½ in. agreed with the facts and was to be accepted. (3) The order had no frieze. Mr. Dinsmoor published about the same time (*American Journal Archæolcgy*, 1908) a careful examination of the evidence, in which he independently used much the same arguments in regard to the form of the monument. A little later Herr J. Bühlmann studied the monument

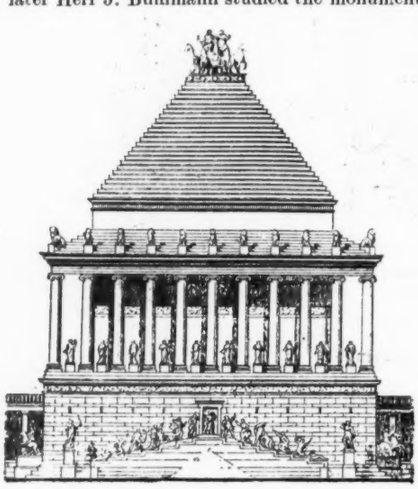


FIG. 1.

in the Vienna *Zeitschrift* and again reached much the same conclusions. He also left out the frieze from the order and reverted to the idea that the pteron would have been roofed separately from the pyramid, as had been suggested by Bernier and by Oldfield. Fig. 1 is Bühlmann's scheme, and Fig. 2 Bernier's. It may now be regarded as agreed that the peri-

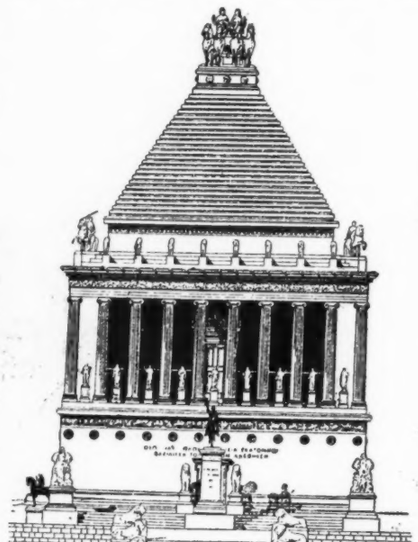


FIG. 2.

style of 36 columns was broken into long fronts of ten bays and short fronts of eight bays; that it stood on a high podium and that the order had no frieze (Fig. 1). Mr. Dinsmoor also investigated the dimensions, using the Greek foot as determined by Dörpfeld. His results were vitiated by some wrong assumptions, but his method was clearly a right one. When I wrote before I had only an older estimate of the Greek foot and I found I could not apply that so as to obtain any satisfactory results. Now, however, experimenting with a Greek foot of .295m. (about 11⅝ in.) I find it a master key to Greek schemes of setting out and "proportions." All measurements of Greek monuments should be made with the old Greek foot and dactyls.

DIMENSIONS.—The steps of the pyramid are one foot (G.) high on the face, so is the top course of the architrave, while the whole, with its top member, was 3 ft. (apparently half the height of the entablature). The foundation courses of the structure are said to have been "about a foot" high and the courses of masonry at the Museum (under the statues) are exactly a Greek foot high. When I wrote before I estimated the plinths of the columns as about 4 ft. 10½ in., which is just five Greek feet. Moreover, this dimension was half the columniation of 9 ft. 9½ in., which is clearly ten Greek feet as had been proposed by Dr. Six. Newton's party found a great foundation mass about 108 ft. by 127 ft. I saw before that the difference of 19 ft. represented two bays of the structure. It now appears that this difference must really have been 20 Greek feet and that the whole foundation was 110 by 130 Greek feet. The foundation line was thus 5 ft. beyond the size of 100 by 120 Greek feet at the basement or the platform of steps implied by Pliny's dimension of 440 ft. round about.

An interesting fact regarding the system of measures springs to the eyes in reading Newton's account of the sculptured figure of Mausolus—"the height of this statue is 9 ft. 9½ in. without its plinth." This statue, then, was ten Greek feet high, equal to a columniation. The figure of Mausolus himself was the standard of his tomb. The total height of the monument as given by Pliny (140 ft.) is doubtless correct. The narrow front of the basement and the long front of the peristyle were both 100 ft. As Adler (I think) remarks, it was appropriate that the tomb of the son of Hecatomnos should be a hundred foot building (Hecatompedon). Pliny's dimension of 63 ft. for the long side of the building cannot be explained. It *might* be the length of the sculptured groups on the flanks, or the length of the cella within. It *might* be a clerical error, LXIII for CXIII (the podium must have been about this length), or a mistranslation from the Greek whereby 63 ft. for the *least* size (the width of the cella, which would have been just this dimension) became the greatest; the "even the least front" form is rather to be expected in speaking of a large building. It may be some other mistake.

THE ORDER AND GENERAL FORM.—Pliny says that the pteron was 25 cubits (37½ Greek feet) high. He then makes some remarks on the sculpture and adds that over the pteron was a pyramid equal in height to the part which was

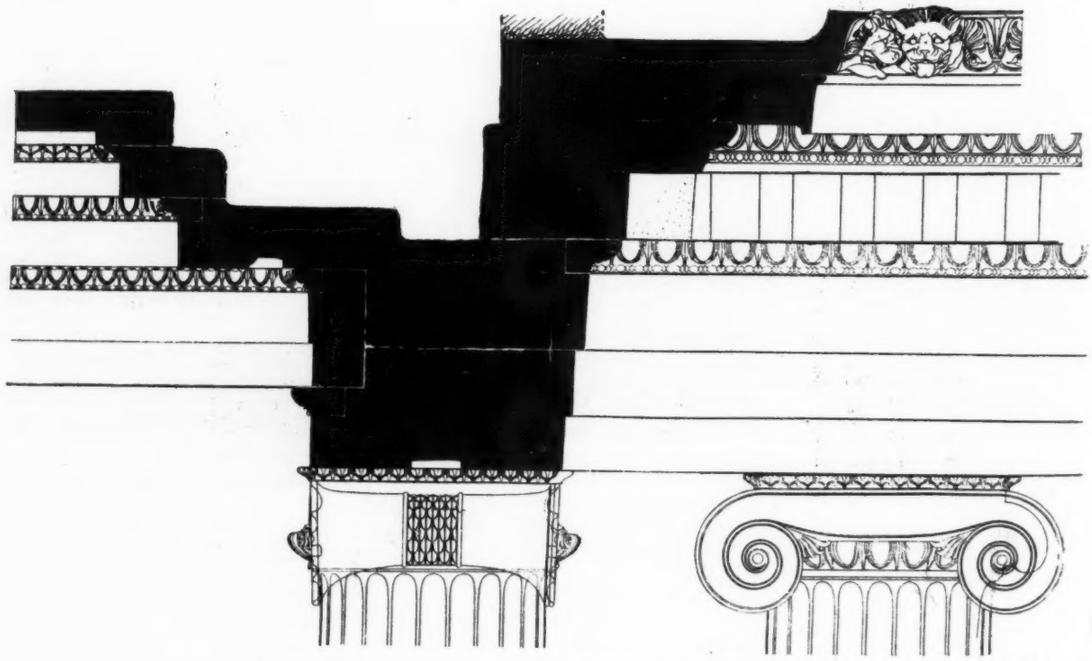


FIG. 3. ADAPTED FROM ROYAL COLLEGE OF ART SURVEY.

below it. This seems to mean that the pyramid was also 37½ ft. high. This interpretation has been argued over, but I find that Mr. Dinsmoor also is clear that this must be the meaning, and I will only add one observation to the long discussion. Although 37½ ft. seems anything but a "round dimension," it is in fact the half of 75 ft. and such a measure for the Order and the pyramid together with some attic between them falls in very perfectly with a decimal scheme of dimensions. If we now assign 25 ft. to the chariot group, with its pedestal, we have a round 100 ft. of height above a podium of 40ft.

The entablature, as already said, was 6 ft. high. (English measures are 1 ft. 6½ in., 11½ in., 5 in., 10 in., (lost), 1 ft. 6⅝ in. See Fig. 3.) Deducting 6 ft. from Pliny's dimension, we have 31½ ft. G. for the rest. I would assign 30 ft. for the columns (as was suggested by Dr. Six) and give the 1½ ft. to some stylobate below it. (Mr. Dinsmoor made the entablature 9 ft. by including the Amazon frieze, which is 3 ft. high). The dimension of 30 ft. is five times the entablature and three times the standard 10 ft. of the columniation. As will be shown later, the temple at Priene built by the same master had columns 40 ft. high, and those at Ephesus were 60 ft. Calculations from the drums actually found suggest a dimension rather below than above 30 ft. I have, however, again been over Lieutenant Smith's diagram and dimensions (in the MS. Room) and find that 30 ft. was likely enough. Penrose estimated the height as "within a small fraction of 28½ ft." English. The diameter of the column at the Museum is 3 ft. 6⅝ in.; doubtless 3¾ Greek feet. The columns were thus exactly eight diameters high, and the diameter was three-eighths of the columniation.

The dentils of the cornice were spaced at intervals of about a foot—doubtless a Greek foot exactly, ten to the columniation of ten feet, as at Messa. The stones of the gutter, each with its lion's head spout, were about 42 in. long; while three divisions to a bay would have given stones only about 39 ins. long. It appears that what was done was to put a lion's head over each angle column and over each central column, and then to have one gutter stone less than if there had been three to a bay between these fixed points. On the short fronts there would have been 22 instead of 24, and on the long sides 28 instead of 30. This gives in the one case lengths of 3.63, and in the other of 3.57 Greek feet. These dimensions come so near to the measured 42 in. that there cannot be a doubt that this was the scheme. Slight variations in the adjustment of the palmette ornament to the lions' heads are obvious. Effort was made to make the cymation appear large, as is shown by the way the lions' heads rise above the moulding. From the spacing of the heads we can control the projection of the cornice as shown on Fig. 5. The projection at the dentil level was about 2¼ ft. (E.) from which it results that dentils also came on the axes of the angle and other columns. A remarkable characteristic of the entablature is the way in which the faces are all inclined out of the vertical.

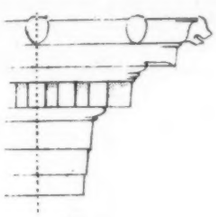


FIG. 5.

The discussion as to whether the Amazon frieze belonged to the entablature was lately revived by Wilberg, who argued that Wiegand and Schrader were mistaken in omitting a frieze at Priene, a sister work to the Mausoleum. In the meantime, I had had access to Pullan's notes, made during his excavations at Priene, and found that some unpublished facts negatived Wilberg's arguments. Further, I had noticed that the Amazon frieze had been surmounted by a large Lesbian leaf moulding otherwise unassigned. This is proved by two facts. On the leaf mould there are square dowel holes near the edge similar to others on the top of the frieze. (The pins were put so near the face for easy access in running in lead; see a diagram in Wiegand's "Priene"). The spacing of the carved leaves agrees with the bead and reel moulding on the upper edge of the frieze. The Keeper of the collection has been kind enough to allow me to verify this by measurement, the intervals of both are about 5½ in., doubtless 7 dactyls exactly (Fig. 6). It is certain that this leaf moulding crowned the Amazon frieze, and also that the frieze did not form part of the entablature of the order. It is known that at the Nereid monument a sculptured band was placed over the high plinth, and it becomes almost certain that the Amazon frieze occupied quite a similar position at the Mausoleum. From the same comparison we may decide that the podium of the Mausoleum was built to "batter." The bottom moulding of the Amazon frieze is itself enough to show that it formed a band in a wall.

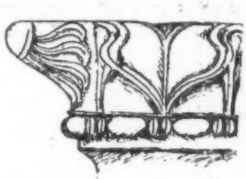


FIG. 6.

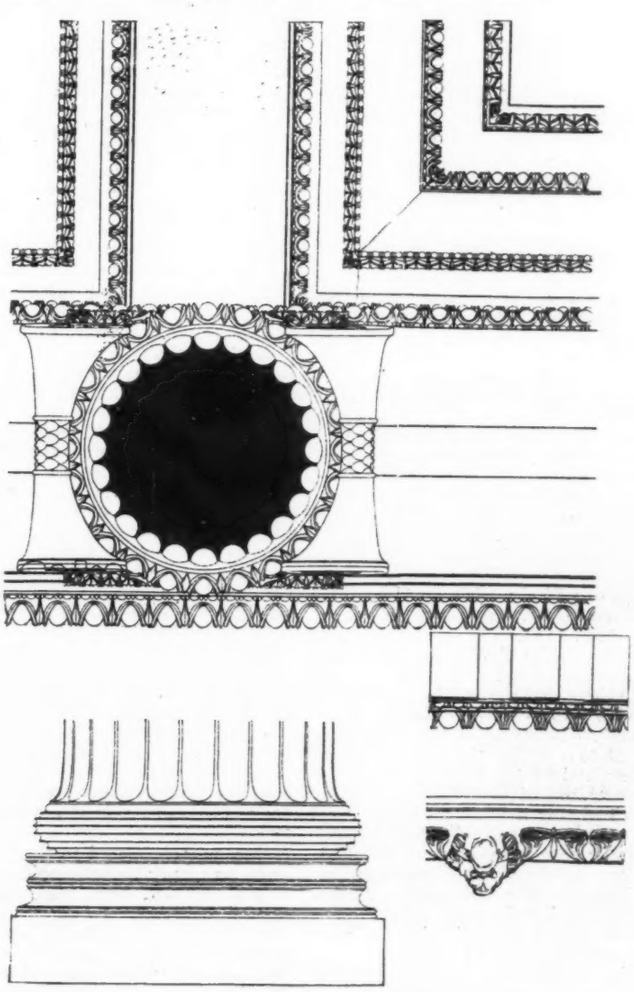


FIG. 4. ADAPTED FROM ROYAL COLLEGE OF ART SURVEY.

All this may be regarded as settled. It has been taken for granted by nearly all those who have worked at the explanation of the Mausoleum that the pyramid base rose from the entablature of the order, a supposition which brought many difficulties. If the entablature was only about 5 ft. 10 in. deep, instead of about 8¾ ft. as it would have been with the frieze, it is all the more difficult to think that the great pyramid of steps was planted directly upon it. Moreover, the entablature was crowned by an ordinary gutter with lion's head spouts, all very thin and delicate. It seems an impossibility that the pyramid steps can have been based on such a member. Again, the cross beams from the entablature to the cella wall are very light, and the lacunaria was exactly like that of the pteron of the temple at Priene, which came under an ordinary tiled roof. On reconsideration of these facts, all architects will feel that the pteron must have been roofed separately and that the pyramid must have been reared on the solid walls behind (Fig. 1). This implies a band of wall rising above the roof of the pteron. Such an attic has been suggested, but the structural necessities have hardly been sufficiently brought out. It is recorded that the pyramid had 24 steps; and these, if all of the maximum width, plus a platform, would have extended over the pteron; but narrower steps were also found, and it is generally agreed that the slope was made steeper below the chariot pedestal. It is not an unlikely procedure in designing the pyramid that it was first set out as if complete without a platform at the apex, and that the top steps were then made steeper to compensate for the room taken by the chariot pedestal. The evidence that the pteron had a roof separate from the pyramid is confirmed by another consideration. Such an arrangement allowed of the pyramid being completed with the colossal chariot group in

place before the slight work of the pteron was finished. It cannot be thought possible that the giant horses should have been hoisted over this colonnade, past the elegant projecting cornice and above the delicately-balanced lacunaria. I suppose that at least two bays were left unbuilt, and the pteron unroofed until the pyramid with the chariot group at its apex was completed. The horses were first drawn up to the pteron floor, then to the base of the pyramid firmly planted on solid walls, and then up the slope. The omitted work was then easily finished. The peristyle was in fact a light addition to the main work, parallel to the colonnade around the dome of St. Paul's.

When a full and revised restoration of the monument is made, the relation of the diagonals of the peristyle and the pyramid will have to be considered. I have no doubt that the peristyle was at the same distance from the cella both at the ends and the flanks—the large square ceiling coffers testify to that. Any necessary adjustment could be made at the height of the pteron roof and at the chariot basis (see Fig. 7.)

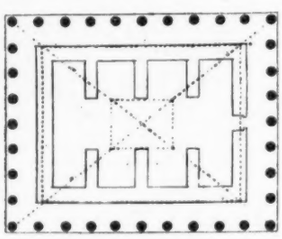


FIG. 7.

In the outer wall of the foundations opposite a descending flight of steps evidence was found of a doorway and a marble-paved passage. The account of this is not full enough, but it seems clear that basement chambers would have been made accessible for new burials by clearing out the hidden stairway until such time as the tomb was finally sealed. Besides such a crypt with concealed access there would, I suppose, have been a visible door to a stair leading to the pteron from whence there would have been access to an important sepulchral chapel or cella in which were the sculptures of gods and heroified mortals. There was such a chamber at the Nereid monument.

Of the tomb chamber there is direct record in the narrative of Dr. Guichard, quoted at length by Newton. The authority is good, for it is no vague traveller's story, but was derived from a resident who had been present at the discovery, and the internal evidence (when properly understood!) entirely confirms the story. I give a condensed paraphrase. In 1522, when the Knights were repairing the castle they found in a level field steps of marble raised as a *perron*. Removing these and destroying the little masonry remaining above ground, they discovered that the structure was enlarged at the base. After some days, having opened up a space, they saw an opening as into a cellar, and letting themselves down they found a big square chamber ornamented with columns and cornice carved in relief. The walls were lined with slabs and bands of coloured marble and with battle scenes sculptured in relief. They also found a low door which led into an antechamber where was a sepulchre with a receptacle and cover of lustrous white marble.

Such a sarcophagus is exactly what would have been in the tomb chamber, and the lining of the internal walls with marble slabs coincides with what we are told of the Palace of Mausolus; arrangements of coloured marble were coming in at the time when the Mausoleum was built. The "perron" must have been the terrace of steps around the podium and the "enlargement" the spreading into the great foundation area. We are expressly told that little remained above the level of the field. On excavating into this mass they broke into an underground chamber, letting themselves down from above. All is perfectly consistent. Newton, however, thought that the perron was the stylobate of the peristyle, and remarked that the destruction of the ruin did not commence "as Guichard's narrative would imply" so late as 1522. Surely he implies just the opposite. When Newton excavated the site he proved that the great foundation had been removed just as described. (I find that Mr. Dinsmoor has anticipated me in this explanation of the record.) We may conjecture that the series of small, square panels in the Museum containing reliefs of the contests of Herakles or Theseus were the "battle scenes" inserted in the walls. A narrow frieze sculptured with an Amazon battle (1104 and 1105) may also have come from the interior. I have lately found that some similar reliefs in the Ashmolean Museum correspond so exactly that they must belong to the same series. The Mausoleum in its general idea was a tomb-house which contained a sarcophagus and it was in the line of descent from the Egyptian Pyramids, which contained sarcophagus chambers. Later Egyptian tombs had more or less cubical structures below and pyramidal roofing above. This was the type followed by the Mausoleum on a great scale. Fig. 8, from a Lycian sculpture,

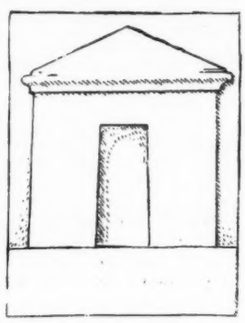


FIG. 8.

represents a small tomb-house of the same general type. Recently a tomb of the Mausoleum type has been found in Greece proper.

THE SCULPTURE.—It is recorded that the Chariot group was placed on high at the apex of a pyramid, of course on a pedestal or platform of suitable size. It has been argued whether the colossal figures of Mausolus and Artemisia were in the Chariot or otherwise placed. The portrait statues and the horses were found close together, and this seems *almost* a proof that they were part of the same group. On the other hand it appears from Newton's account ("Travels and Discoveries") that lions and some other portrait statues were also found close by, and it is with the latter, I think, that the royal pair should be associated.

These great statues are elegantly costumed and posed as if stepping forward or just pausing with the weight on one foot—most unsuitable costumes and unstable attitudes for chariot driving. Of neither can it be said that the position of the arms, which was much alike for both figures, suggests holding reins. The lower parts of the figures, especially one lovely foot of Artemisia, are exquisitely finished. The backs of the figures are treated in summary fashion, as if they had stood in front of a wall. If the figures had been in the chariot an apotheosis would have been suggested, and hence Newton was drawn to think that the female figure was a goddess, a view now given up. On the other hand, an empty chariot might be set up as a memorial, just as a soldier's horse is led to his funeral. The Chariot group is recorded to be by Pythios, the architect of the monument, but the figures are clearly by a great sculptor.

Further, there were several other portrait statues, notably, two female figures, of which the heads are preserved, which are like the royal pair in scale. For such reasons I have decided for myself that the great royal figures were not in the chariot but rather in a funerary chamber, as will be suggested below.

The chariot horses were standing still, as described by Newton; "from the action as well as from the fact that two fore hoofs were found attached to the base it may be inferred that all the horses were standing." His adding that perhaps some of them were "pawing the ground" has been interpreted into action not to be distinguished from that of progression. I give in Fig. 9 a restoration of a horse from which

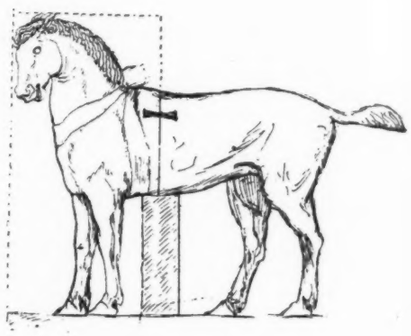


FIG. 9.

it will be seen that firm standing was necessary to the construction; the forequarters were cut out of a high block balanced on the front legs; this was cramped at a vertical joint to the body and a post beneath gave additional support at the junction. The head is turned to the side and brought well back to the neck the better to come out of a block of marble of reasonable size. (The remnants of the bronze headstall are omitted). This colossal horse is indeed a masterpiece of constructive sculpture. Newton says that "the back which could never have been seen after erection is less carefully chiselled." Of the chariot only fragments of the wheels were found. Each was divided into two parts at the horizontal diameter. From some portions of thin filling-in between the spokes Pullan filled up alternate spaces. I think rather that there were only narrow horizontal strips of this "web" to strengthen the spokes through which the joint was made. A roughly oval post at the Museum is described as a support for the chariot, as doubtless it was. The floor of the chariot when balanced on such a central post would not have supported the two colossal statues; if these had been in the chariot the void beneath the floor would have had to be a solid mass.

The two royal portrait statues show the same regard in their "planes" for the blocks whence they were hewn as do the horses; indeed this was a constant characteristic of all true marble sculpture, as appears very clearly in the figures of the Parthenon. Both the figures fill out large square blocks set on end, many of the surfaces conforming closely to the original vertical faces of the blocks, thus there was as little cutting to waste as possible. The left arms of both held up their robes, and the right arms seem to have drooped in advance as if they held offerings. Indeed this is quite clear as to Artemisia; enough remains of the right armpit to show that the hand must have had the palm outwards. The vesture of Artemisia is practically repeated in a small votive tablet in the same gallery, which shows Idrieus and Ada, the brother and sister of Mausolus, worshipping Zeus. Here the left hand of Ada is thrown up palm outwards in adoration, and this explains the gesture of Artemisia: nothing else would so well suit the evidence of the lifted forearm and fall so easily within the block. The figure of Mausolus seems to have shown only a slight variation of the same gesture. (The lines of the group would be better if he were on the other side of Artemisia than as set up).

One point in regard to the drapery has not so far as I know been recorded: a diagonal line runs across and down from the left thigh of Mausolus and a similar parallel line slants from the left knee; evidently the garment was decorated in stripes such as we find on later portrait sculpture in a more characteristic form. The heads are cut in separate blocks inserted in

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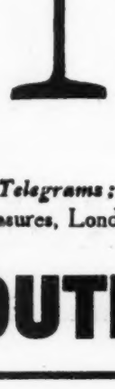

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sockets. It is surely clear that neither of such figures can have been driving a chariot.

Right in the middle of the foundation area Newton found a colossal seated figure. It has been argued whether this is a statue of Zeus or a second portrait of Mausolus. "The figure is so mutilated that the original motive cannot be ascertained; but the left arm may have been raised, supported by a spear or sceptre while the right may have held a bowl. The figure was identified as a divinity, perhaps, Zeus, by Sir C. Newton, but the figure would do equally well for Mausolus, or some heroified ruler . . . the folds of the drapery are still coated with purple colour" (B.M. Cat.) The whole attitude and character are suitable for Zeus, and the little votive relief above mentioned supports this ascription. A figure of Zeus similarly draped also appears on coins of Mausolus. Further, another statue of a god existed, for a fine head of Apollo was found close to the statue of Mausolus. Apollo, too, it is known, was a favourite deity of the prince's. Again, it is an accepted fact that there was in the monument some funereal chamber or cella where such figures would have been in place. I suppose that in such a chamber there would have been a group of gods at one end—Zeus in the midst as if rising in welcome and acceptance of offerings, with Apollo playing the harp on one hand and possibly the name goddess of Artemisia on the other. Against the other walls I place in supposition Mausolus and Artemisia, Idrieus, Ada, and others, as if making offerings. Enough remains of the left arm and the draping to show that the Zeus was a very noble figure. The head of Zeus at Boston seems to me to be very similar in style to the head of Mausolus and it should be noted that this head was found near by at Mylasa. Our figure may have had such a head. As to the attitude, the left foot (shod) was on a stool, the other advanced. Some trace of the purple colour of the mantle may still be seen. A similar colour was found on the sarcophagus "of Alexander." Fragments of a large number of lions were found. These lions would, I feel confident, have occupied the inter-columniations of the peristyle serving as a sort of balustrade, also guarding the monument by their apotropaic power. For this purpose 36 would have been required. "The lions must have been a marked feature. From the fragments it may be calculated that there were at least twenty, and probably many have disappeared" (Newton).

At the Nereid monument a series of figures of "Nereids," *like to one another* stood between the columns, and there were also four lions which watched the four quarters. The large number of lions all alike at the Mausoleum could only have stood in the intercolumniations also. Note the suitability and the size, the tails were drawn in against the legs to be firmly attached.

Newton describes several fragments of other animals—a lioness and a panther, also the head and foot of a boar "to which a hindquarter and shoulder also seem to belong." "It must have formed part of a boar hunt, as among the fragments is part of the head of a hound corresponding in scale." The paw of a dog is mentioned as well. The hindquarters of the boar are set up at the British Museum away from its other members and next to the forepart of the panther, as if they belonged to one another. Moreover, this fragment of the boar is mounted at a wrong angle. The fore foot shows that it crouched in front close to the ground with its back up. This beast could be easily "restored" on paper (Fig. 10). The big horseman found on the site must, as Dr. Six showed, have formed part of a great hunting group, although it cannot have occupied a pediment as he suggested. More probably it was set against the podium of the monument and it doubtless represented Mausolus. Other fragments are the body of a colossal ram, very similar to the sheep led to sacrifice on the Ephesus pedestals, and some cloven hoofs—one of an ox. As Dr. Six also suggested, these must be parts of another sculptured composition representing a sacrifice. With the animals were doubtless associated some of the many fragments of figures. One head in the Museum ("1057, Head with Persian head-dress") must be that of a huntsman. Amongst the reliefs of the Nereid monuments, one series represented animals being brought to a sacrifice and another a hunt. Compare also the Alexander sarcophagus.

FIG. 10.

The reliefs of the Amazon frieze are of amazing force, invention and delicacy. They are something apart and are certainly great masterworks. They have never been adequately illustrated, and the plate in Newton's "Travels," of a mounted Amazon, is still the best rendering of their quality. Restored illustrations of some of the better preserved groups might easily be made on enlarged photographs. I give here two slight sketches (Figs. 11 and 12). Many details of interest yet remain to be drawn out: thus the sword wielded by a Greek in 1020 is of a curved single-edged type which was brought to the west, and several examples have been found in Spain. I may remark here also that a helmet with its visor modelled in the form of a face, represented on one of the fragments in the round, must be the earliest known examples of a kind of ceremonial helmet used by the Romans, some of which have been found in Britain. Several of the slabs of the frieze preserved at Halicarnassus were drawn by Dalton in 1749, who identified the subject. He restored all the figures in his plates so that it is difficult to use them as evidence, but doubtless parts were in a better state two centuries ago than now. I do not think, for instance, that in hastily drawing the slab 1008 he would rightly have recognised Herakles in the present almost destroyed figure. Close comparison of his plates would probably yield many good suggestions.

FIG. 11.

FIG. 12.

The Amazon frieze may, from its delicacy, be supposed to have formed a band at no great height on the podium running round just above a plinth. Several slabs were found near the line of the building, and Newton wondered that they could have fallen from the great height he supposed and yet be so unbroken and continuous. To assign the parts from the four fronts to as many artists as German scholars have done, following an old story, would, I think, be a mistake. It is just the sort of myth which would be likely to arise about a four-sided structure. (Compare the story of the four Amazon figures at Ephesus.) One artist must have settled the scale, distribution and treatment. Again, German authority decided that a slab acquired from Genoa did not belong to the same frieze. This slab, however, shows plainly that any little differences in the mouldings were caused by new working the margins.

The Centaur frieze is best assigned to the top of the podium, as Newton suggested, and following the analogy of the Nereid monument. Its bottom moulding shows that, like the Amazon frieze, it formed a wall-band and was not set above an architrave or any projecting course.

The Chariot frieze is a very delicate work. It was made up by a succession of very similar groups of racing chariots spaced at equal intervals. These intervals seem to agree well with the columniations, and we may best suppose that this frieze surrounded the cella in such a way that a group showed in each inter-columniation. This scheme must be considered together with the great chariot on the apex of the pyramid and the general form of the monument. On the whole, I am drawn to think it possible that, when Pliny said that the monument was contracted above like a *Meta* (the goal of a race course), he may have reported what had been the symbolic intention of the design. The race was run; the chariot was empty. The simile to a *Meta* does not call for any special slenderness or steepness. Not only does Vitruvius speak of the little "Temple of the Winds" at Athens as like a *Meta*, but one of the early pilgrims to Jerusalem compared the Holy Sepulchre to a *Meta*.

All the sculptures and architectural members were brightly picked out in colour. Even the horses of the chariot group appear to have been coloured. The lions were of a "dun red, reddish brown or tawny," their tongues and jaws bright red (Newton). With gleaming white teeth and eyes, this colouring must have seemed to touch them into life.

In the "Architectural Review" for 1915 (p. 117), I offered a restoration of the Temple of Mars, which was situated not far from the Mausoleum, and assigned to it the remarkable necking band of an Ionic column in the Museum. I should here like to make two little corrections. I would now restore the capitals with double volutes like those at the Erechtheum, at Delphi (see Pomtow), and at Ptolemais in Syria (see Renan's "Mission"). The palmettes of the necking should be spaced over the flutes, not over the edges between them.

Public Works in New South Wales.

The report of the Department of Public Works, New South Wales, for the year ended June 30, 1919, has just reached us. Although no large new building work was put in hand, considerable progress was made with public buildings already under construction. The report indicates that some very large schemes are now under consideration for the improvement and extension of the water supply and sewerage works in the State, particularly in Sydney and Newcastle.

HOUSING AND TOWN-PLANNING NOTES.

Housing at Coventry.

The Coventry City Council Housing Committee has reported that contracts have been entered into for 465 houses, and that contracts for a further 54 would be signed shortly. The cost of these 519 houses, exclusive of the sites, will be over £500,000. In addition, there are 56 already in course of erection and tenders for 122 are being considered. The Committee has also in hand a scheme for converting hostels into 695 temporary dwellings.

Communal Town Planning.

At the international conference of the Society of Friends, held at Oxford last week, Mr. T. Alwyn Lloyd, F.R.I.B.A., explained a proposal for the founding of a new town where the principles of co-operation and communal service could be put into practice. Mr. Lloyd said that it was not merely a scheme of housing reform, but would touch on almost every branch of the "art of living together," and would be a contribution towards the reconstruction and transformation of the national life. A committee was at work preparing the scheme, and a body known as the Pioneer Trust, Ltd., had been formed to look for a site.

WEEKLY HOUSING RETURN.

Progress of housing schemes up to August 21: Schemes submitted, 10,956; schemes approved, 7,727. Lay-out schemes submitted, 5,710; approved, 5,063. House plans submitted, 249,217; approved, 234,218. Tenders submitted, 157,148 houses; approved, 141,026 houses. Contracts have been signed for 90,802 houses.

Schemes dealt with during the week ended August 21: Schemes submitted, 49. Lay-outs submitted, 61; approved, 62. House plans submitted, 1,911; approved, 3,164. Tenders were submitted for 2,804 houses and approved for 2,544. These schemes included the following:

Applications.

SITES.

URBAN.—Colne, 11.5 acres; St. Helens, 12.36; Wallsend, 50.25; Wednesbury, 12.

RURAL.—Barrow-on-Soar, 11.12 acres; Barton-upon-Irwell, 10.42; S. Shields, 15.56.

LAY-OUTS.

URBAN.—Bishop's Castle, Buglawton, Cottingham, Darwen, Hastings, Hollingworth, Ince-in-Makerfield, Itchen, Leyland, Middleton, Ossett, Ripley, Sandbach, Swansea, Thurlstone.

RURAL.—Alcester, Ashwell, Bellingham, Boston, Burnley, Eastbourne, E. Retford, Guildford, Hexham, Lutterworth, Melbourn, Mildenhall, Nantwich, Newbury, Penybont, S. Shields, Spilsby, Tarvin, Tendring, Thakeham, Thetford, Wakefield, Wangford, Wellingborough.

HOUSE-PLANS.

URBAN.—London County Council, 730 houses; Bishop's Castle, 22; Bournemouth, 87; Calverley, 36; Cottingham, 98; Darlaston, 16; Dunstable, 70; Hollingworth, 24; Itchen, 62; Leominster, 84; Melton Mowbray, 8; Middleton, 20; Oakengates, 87; Redditch, 32; Southall-Norwood, 100.

RURAL.—Alcester, 10 houses; Bellingham, 27; Brixworth, 10; Ashford, 36; Eastbourne, 12; Fylde, 6; Gower, 14; Guildford, 84; Hexham, 46; Hitchin, 16; Llandyssul, 1; Melbourn, 6; Mildenhall, 18; Nantwich, 30; St. Dogmells, 36; Tendring, 6; Thetford, 12; Ulverston, 18; Wangford, 4; W. Lancashire, 8,

Approvals.

SITES.

URBAN.—Aberavon, 74.83 acres; Chorley, 24.52; Connah's Quay, 13.34; E. Cowes, 10.02; Loftus, 38.87; Risca, 10.5.

RURAL.—Aberayron, 0.25 acres; Durham, 10.60; Spalding, 10; Thetford, 12.23; Wrexham, 22.33.

LAY-OUTS.

URBAN.—Bingley, Bishop's Castle, Leyland, Middleton, Preesall, Scunthorpe and Frodingham, Southall-Norwood, Southwick-on-Wear, Uxbridge.

RURAL.—Alcester, Ashwell, Beverley, Burnley, Cowbridge, Dartford, Eastbourne, Fylde, Godstone, Grantham, Guildford, Hastings, Hawarden, Llandaff and Dinas Powis, Lutterworth, Melbourn, Mildenhall, Nantwich, Newbury, Sunderland, Tendring, Thetford, Thirsk, Uffington, Ulverston, Wangford, Wellingborough, Winchester.

HOUSE-PLANS.

URBAN.—London County Council, 730 houses; Barnet, 33; Bedwas and Machen, 152; Bingley, 2; Bishop's Castle, 22; Bournemouth, 87; Brighouse, 42; Calverley, 36; Darlaston, 16; Darlington, 98; Dartford, 309; Dunstable, 70; Leominster, 84; Leyland, 29; Linslade, 6; Melton Mowbray, 8; Middleton, 20; Newton-in-Makerfield, 40; Northampton, 100; Oakengates, 87; Preesall, 6; Pudsey, 68; Redditch, 32; Royston (Herts.), 30; Slaithwaite, 48; Southall-Norwood, 100; Uxbridge, 40.

RURAL.—Alcester, 10 houses: Amersham, 34; Ampthill, 8; Ashwell, 14; Beverley, 4; Biggleswade, 12; Carmarthen, 28; Chester-le-street, 119; Dartford, 10; Eastbourne, 26; Fylde, 6; Gower, 20; Guildford, 84; Hastings, 2; Melbourn, 6; Mildenhall, 18; Nantwich, 30; Newbury, 6; Norman Cross, 20; Sedgefield, 196; S. Shields, 75; Tendring, 6; Thetford, 12; Thirsk, 6; Ulverston, 18; Wangford, 4; Wellingborough, 16; W. Lancashire, 8; Winchester, 2. COUNTY COUNCIL.—Kent, 4.

Tenders Approved.

URBAN.—London County Council, 730 houses, Ashington, 88; Battle, 60; Bognor, 54; Brigg, 24; Bristol, 2; Darlington, 98; Dunstable, 70; Exeter, 13; Henley-on-Thames, 36; Ilfracombe, 53; Lymington, 30; Newport (I. of W.), 6; Northampton, 100; N. Walsham, 6; Oakengates, 87; Redditch, 32; Tenterden, 40; Tavistock, 50; Tring, 12, Whickham, 50.

RURAL.—Bradfield, 4 houses; Campden, 20 houses; Chester-le-street, 24; Chipping Sodbury, 4; Dulverton, 10; E. Preston, 16; E. Stow, 6; Epsom, 36; Gower, 34; Hitchin, 34; Hoxne, 14; Liskeard, 2; Luton, 12; Lymington, 59; Melbourn, 6; Melton Mowbray, 8; St. Faith's, 16; St. Ives, 2; St. Neots, 2; Shepton Mallet, 16; Shipston-on-Stour, 32; Spilsby, 4; Stansted, 16; Stow-on-the Wold, 2; Sunderland, 125; Winchester, 2; Wrexham, 112. COUNTY COUNCIL.—Lancashire, 252.

GRAVESTONE FEES.

A CURIOUS point appears to have been raised in a case recently heard in the Brighton County Court as to whether a special fee could be demanded when an inscription was placed upon a raised kerb around a grave. The case is reported in *The Times* for August 21, and it appears that a fee had already been paid for the kerb as such, but the contention was that when an inscription was placed upon it an extra fee became payable as though it were a head-stone or foot-stone, on which a higher fee was payable. The County Court Judge disallowed the claim, and is reported as having said that originally such fees were prohibited by ecclesiastical law, but a custom to pay them had gradually been established, and it was admitted that the table of fees posted in the church porch had the force of custom and authorised fees for stone kerbs and for head-stones and foot-stones, but it did not authorise fees for inscriptions or for raised kerbs, which were not separate stones but part of the kerb for which a fee had already been paid. In 1917 a resolution had been passed at a vestry meeting authorising the fees now claimed, but the Court held it to have no validity because in the notice summoning the meeting no indication was given that the resolution was to be proposed, and consequently the defendant had not attended; and also because the sanction of the Chancellor of the Diocese had not been obtained.

It is not quite clear whether in speaking of "custom" the Court indicated a long established usage as applied to particular fees or whether the expression referred to the power of passing resolutions making fees. Presumably the latter is what is indicated, or it would have been unnecessary to consider the validity of the resolution passed at the vestry meeting, but we express no opinion on this point, which did not arise in the circumstances of this case.

RAILWAY STATISTICS AND CHARGES.

THE statistics published showing the working of the controlled railways for the quarter ended June 30 appear to show a balance of revenue over expenditure of £358,240, but as this allows nothing for interest on capital, the Government guarantee, based on the earnings on the pre-war year, has to be taken into consideration and the proportion of this is £11,285,000, making the net Government liability for the quarter £10,926,760. The present system of publishing voluminous statistics is interesting, but it may be a question if the expense involved in printing and circulating them is entirely profitable.

A loss is being made under the heading "Other Businesses," which include passenger road vehicles, steamboats, canals, docks, harbours and wharves, and from a recent answer given to a question in the House it appears that of these "other businesses" hotels alone bring in a profit.

There is an inclination to attribute entirely to Government control the fact that the railways from revenue-producing concerns have become non-revenue producing, but it must be borne in mind that the war has affected the railways as much, or even more, than other undertakings, and that only recently have rates and fares been increased to meet the increased cost of material and the largely increased wages bill. When an outcry is raised against any increase in fares or rates the public must remember that, although there has been a steady rise in the price of all commodities, for a long while transport facilities have been granted below cost price. The position now is either that rates and fares must be raised or that the railways must continue to be subsidised out of the public exchequer. If the railways become subsidised, force will be given to the plea for nationalisation, but experience of Government management of industrial concerns in our own country, coupled with the disadvantages attending State-owned railways abroad, will probably make us cling to our old system of privately-managed railway companies. This system has worked excellently in the past, and the public has enjoyed ever increasing railway facilities. The war has increased the cost of everything, and the same cheapness of railway travelling cannot be expected, but the remedy certainly does not lie in a change of system, and recovery is likely to be expedited as soon as Government control can be removed.

Brick Transport Rates.

It has been reported that the Scottish brick manufacturers proposed to close down all brickworks in Scotland as from September 1, pending reconsideration by the Minister of Transport of the alteration in the basic transport rates for bricks. The Scottish Employers' Council for the Clay Industry claims that the alterations were made without sufficient opportunity being given to the trade to consider their effect. The Council suggests that the maximum limiting clause be inserted in Class B, or alternatively, that bricks be transferred to Class A.

THE HOUSING SUBSIDY.

IN spite of the wide publicity given to the Government scheme for the payment of grants for houses erected by private persons or bodies of persons, we are frequently receiving inquiries as to how and under what conditions the subsidy may be obtained. The conditions and procedure to be followed are outlined below.

The amounts payable are as follows:—For houses containing living-room, parlour and three or four bedrooms, and comprising not less than 920 ft. super of floor area, £260; for houses containing living-room and three bedrooms, and comprising not less than 780 ft. super of floor area, £240; and for houses containing living-room and two bedrooms, and comprising not less than 700 ft. super of floor area, £230 per house. No grant will be made for houses with more than four bedrooms, or with a superficial floor area exceeding 1,400 ft. Floor areas are to be measured by taking the combined areas of both stories within the external walls; cellars will not be taken into account, but an attic bedroom may. Where there is a demand for such accommodation, flatted cottages may rank for the grant; in this case each flat complying with the conditions will be treated as a house. Without the sanction of the Minister of Health the number of two-bedroom houses in any area must not exceed 5 per cent. of the total number of houses for which payment will be made. If a form of construction for which, in the case of a local authority's scheme, the Ministry of Health would not sanction a loan for a period exceeding 40 years is adopted, the amount of the grant will be reduced by one-third.

The Housing (Additional Powers) Act, 1919, restricts the payment of the grant to houses completed within twelve months from the passing of that Act, viz., December 23, 1919, with the following provisos for a reduced grant in the case of houses completed within sixteen months: If completed in the thirteenth month from the passing of the Act, a reduction of one-twelfth; if completed in the fourteenth month, a reduction of two-twelfths; if completed in the fifteenth month, a reduction of three-twelfths; and if completed in the sixteenth month, a reduction of four-twelfths. A new Bill is, however, now before Parliament which proposes to extend the time-limit within which "subsidy" houses may be completed until December, 1921.

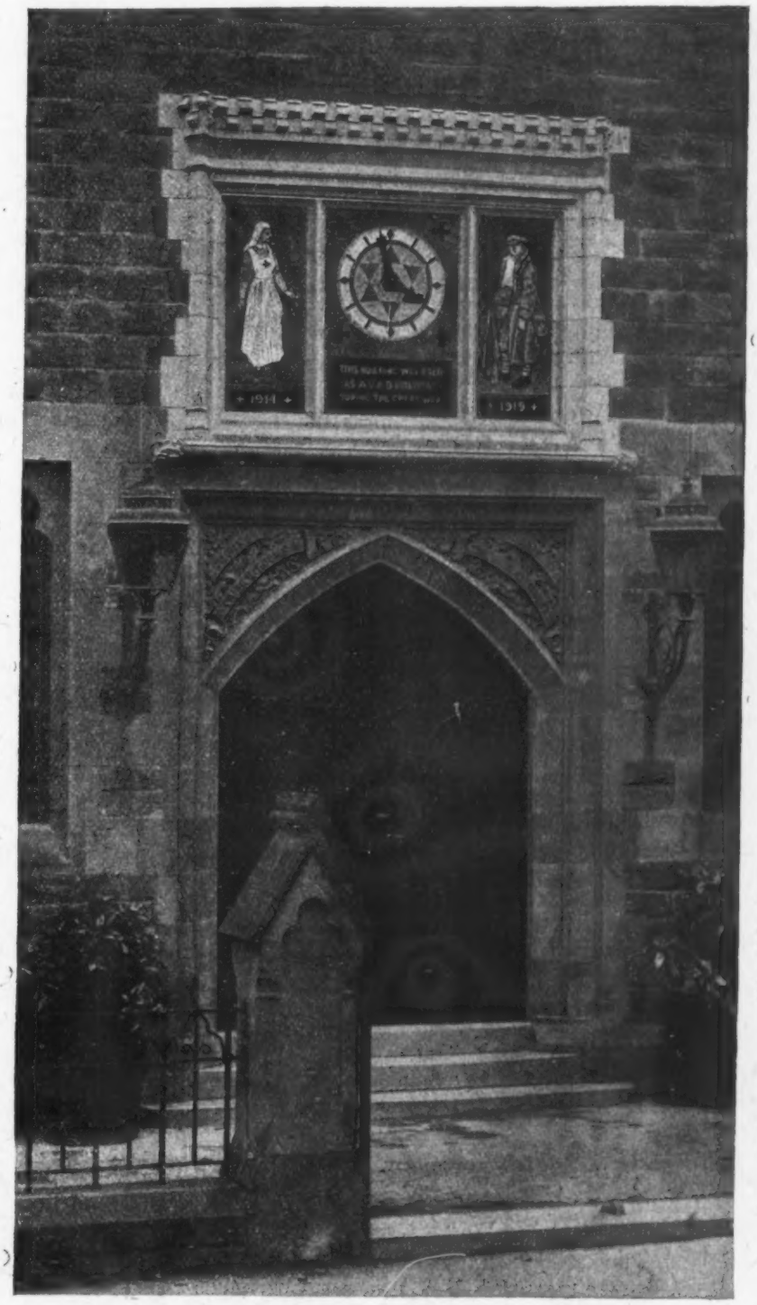
Persons who intend applying for the grant must first submit plans in the form required by the by-laws, if any, to the local authority of the district in which it is proposed to build. In all cases there must be submitted a 1–500-scale block plan (in duplicate) showing the lay-out, roads and sewers; complete plans and sections (in duplicate) of the proposed houses, not less than 8 ft. to 1 in. scale; and an undertaking that the form of construction will conform to the standards laid down by the Ministry. If the plans, etc., are in order, the local authority will issue a certificate (Certificate A), and when the houses have been completed a certificate (Certificate B) will be issued by the local authority stating that they have been erected in a satisfactory manner. When both these certificates have been received they must be forwarded to the Ministry, with a written application for payment of the grant, which will be paid as soon as the Ministry is satisfied as to the correctness of the claim.

The procedure is fully detailed in a pamphlet entitled "Grants to Private Persons or Bodies of Persons Constructing Houses under the Housing (Additional Powers) Act, 1919" (H.M. Stationery Office, price 2d. net), which also contains a specification to which the houses must conform and copies of the certificates.

The latest return of the Ministry of Health states that so far plans for 17,593 "subsidy" houses have been approved, the grants for which will amount to upwards of 4½ million pounds. The total which has been made available by Parliament for grants is 15 million pounds. Up-to-date, nearly 1,000 houses have been completed, and the Ministry has actually paid £181,253 6s. 8d. in respect of 882 houses.

HOUSING CONDITIONS IN LOS ANGELES.

WE have received a copy of a report by the Los Angeles Society for Prevention of Tuberculosis, by Gladys Patric, M.D., giving particulars of conditions in the Ann-street district of that city, which is largely occupied by Mexicans and Italians in very poor financial circumstances. A large number of the houses are built in courts, a family possessing two rooms. The report is illustrated by a number of instructive diagrams which tell a terrible tale of tuberculosis, and we are told that while the general city death-rate from this cause is 17.4 per cent., in this district it is no less than 39.2 per cent. The following factors are given as the causes of this excessive rate: Low wages, poor food, overcrowding, insanitary conditions, ignorance of personal hygiene, and prevalence of flies. Various remedial schemes are put forward for consideration by the Health Department. This is evidently a case where drastic measures of housing reform are necessary, and we hope that the Society will succeed in effecting them.



A Clock Memorial.

[The St. John's Parish Rooms, Abbeydale, Dore, were used as a V.A.D. Hospital during the war, and this memorial has been erected in commemoration. It is placed above the main entrance, and is executed in masonry and mosaic, the wall above having been cut out to receive it. The masonry is 8 ft. wide and 7 ft. high, in three panels, having moulded string with carved bosses, splayed moulded sill, mullions, jambs, head and embattled cornice. The centre panel is 3 ft. 9 in. by 2 ft. 7 in., and contains the clock dial, which is of white and gold mosaic with green back, and has the following inscription below the dial in gold letters and purple back, viz.: "This Building was used as a V.A.D. Hospital during the Great War." The side panel on the left is 3 ft. 9 in. by 1 ft. 6 in., and contains the figure of a nurse in uniform in coloured mosaic with panel below, "1914." The other panel has a figure of a "Tommy" in full kit, with panel, "1919." The hon. architect, Mr. H. Perkins, F.R.I.B.A. (Messrs. Perkins & Bulmer, Leeds), prepared the design in collaboration with Mr. E. C. Skill, of Sheffield, who made the drawings and cartoons for the mosaic panels, which were executed by Messrs. Rust's Vitreous Mosaic Co., London.]

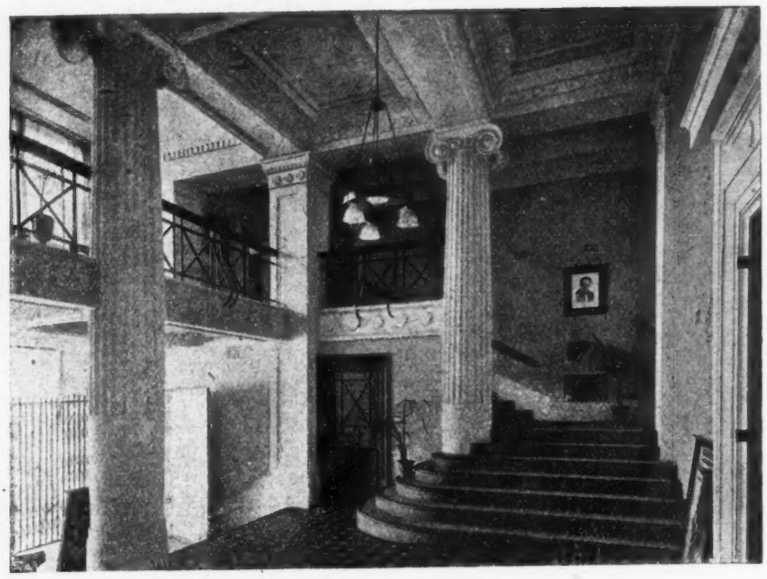
THE CONTINUATION SCHOOL MOVEMENT.

LONDON does not always lead the way in educational matters, but the report of the L.C.C. Higher Education Committee, which we have before us, is certainly an example of action for other centres. Compulsion in the matter of these schools is, perhaps, wisely deferred until September, 1921, when all local authorities will have to exercise compulsion in the matter of attendance. Next January, the London schools are expected to open with about 15,000 pupils—the "appointed day," happily agreed upon generally, being the last day of the preceding school term. It is estimated that, for two years subsequently, a like number of pupils will be added to the schools every three months. This process will continue as the fourteen to sixteen stage merges into the sixteen to eighteen group, and finally in ten years from now some 500,000 scholars should be found in these schools. How is this enormous increase of accommodation to be found? The Council will have twenty odd schools in commission before the close of the year, but this is a drop in the prospective ocean.

The position, though formidable enough, is not quite so bad as it looks, since the use of a school for a given group of pupils is only required on two half days a week. Thus the working capacity of a building may be multiplied by five for continuation school purposes. There are other sources which must be tapped for the provision of buildings, and it is to be hoped that these will prove fruitful, not merely in reducing our financial burdens—a by no means unimportant consideration—but because other than State interests are most necessary to the success of this movement. We refer to Works schools and the voluntary help of the Non-Provided or Denominational schools under the old Act of 1902. Schools thus supplied for continuation purposes will be in the same general position as existing Non-Provided schools. The buildings will be found and maintained by the Works or Denominational Body, and the working of the schools will be maintained by the Education Authority.

There will be many matters of detail to settle and the social aspect of these schools, together with their power of making themselves a real centre of the life interests of their students, is all important. These are things which further knowledge and experience of this movement must necessarily control. The curriculum again will vary with local circumstances, but it is gratifying to see that, during the first stage—fourteen to sixteen—the intention is to put general education in the foreground and to introduce vocational bias only in the later years. The actual teaching will vary to some extent, according to the character of the trade interests of each particular district, and in the later stages may have a definite technical character. We understand that a good many Works schools have already been established, and no doubt more will be available shortly; but in spite of these facilities, places will be none too numerous. The cost of establishing these twenty-two schools, as far as capital is concerned, will be about £6,000 apiece during the present financial year and ultimately during the next decade—in all about £2,000,000. Everyone interested in education will watch the development of this new phase of school life with hope for its success. Much will depend upon the enthusiasm and sympathetic attitude of the teachers and the breadth of their views, and also on the way in which they and the authority over them keep in touch with the daily employment of the pupils.

Messrs. Winget, Ltd., have opened a branch at Sheffield (32, Norris Deakin Buildings, King-street), at which they will be pleased to answer inquiries regarding their concrete block-making machinery and allied products.



Entrance Hall, Picture Theatre, Christchurch, N.Z.

Picture Theatre, Christchurch, N.Z.

MR. W. GRAY YOUNG, F.N.Z.I.A., ARCHITECT.

[This theatre has been built in Christchurch from the designs of Mr. W. Gray Young, F.N.Z.I.A., of Wellington, N.Z. The exterior is finished with picked bricks and cement stucco facings. The interior is finished in plaster tinted in cream and gold. Seating accommodation is provided for 1,025 persons.]

THE BUILDING TRADE.

THE NORTHERN COUNTIES' FEDERATION OF BUILDING TRADES' EMPLOYERS.

AN executive meeting of this Federation was held at Sunderland on August 19. The chair was occupied by Mr. S. Miller, and there were present Messrs. Tweddle, Rigby, Smith, Fairnington, Armory, Rutter, F. Willoughby, Mothersdale, Stephenson, R. Easten, Carr, Hudson, Huntley, and R. S. Waddle.

Overtime.

A resolution "That the Northern Counties Federation be requested to consider the serious dissatisfaction caused by overtime being worked by members of the Federation, with a view to steps being taken nationally not to exceed 44 hours a week," was discussed, and the meeting was asked to consider the question of policy with reference to overtime generally, as contractors were advertising for workmen and offering the inducement of overtime to secure them. It was pointed out that on Tyneside and Wearside both employers and operatives were favourably disposed to granting permission to work overtime on housing schemes, providing the Ministry of Health was prepared to sanction the extra expense thereby entailed. The Tees-side Conciliation Board had refused to entertain applications from contractors to work overtime on various works, including housing, but their views were no doubt affected by the different experiences of contractors who were on fixed contracts for housing and were unable to obtain any addition to their prices in respect of overtime if such were worked. To allow overtime being paid on some housing schemes would handicap those who were on fixed prices, and, in fact, would leave some housing contractors without any men at all. After full discussion it was resolved: "That it is desirable to restrict the working hours all round to 44 hours prescribed by the Rules, provided that if the Ministry is willing to reimburse contractors on all housing schemes, and to do so in all cases whether the contractor is on a fixed price or cost-and-profit or fixed profit, then employers are recommended to accede to requests made to Boards on which they sit to allow overtime to be worked on housing schemes, limited to ten hours per week at the outside. Overtime to be paid only when a full week of 44 hours has been worked."

Walking Time and Country Money.

It was reported that the question of local boundaries had been settled in practically all the Local Association areas. The question of the principle of paying walking time to jobs outside boundaries was still under consideration on Tyneside and Wearside, but apparently the question had been settled on Tees-side, whose representatives stated that where men were travelling from the town where the contractor's works were situated to jobs outside the fixed boundary the men were receiving walking time pay. On Tyneside the men claimed walking time on all jobs outside the fixed boundaries, irrespective of whether they were sent to or sent on the job, with a provision that the Conciliation Board might exempt the job if thought desirable. The employers contended for the right to set men on jobs irrespective of where they were coming from without being compelled to pay walking time, except in those cases where the Board awarded walking time. The position on Tees-side appeared to be that the employers were paying walking time to all jobs outside the fixed boundaries to which men were travelling.

It was reported that the National Conciliation Board had settled the question of country money in the case of Yorkshire by awarding 3s. 6d. a day to workmen sent to work away from home. It was also stated that Tees-side had left the question of country money, which they considered should be settled nationally, to the discretion of the contractors and workmen on Tees-side individually, pending a more general settlement. The same position with regard to country money was the case in Sunderland.

National Conciliation Board Membership.

A letter was read from the Secretary of the National Federation advising the N.W. Federation to tender notice to withdraw from the National Conciliation Board scheme. The letter pointed out that the Council of the National Federation desired that all steps should be taken to prevent further increases on the present rate of wages. It was resolved that the necessary notice to withdraw from the scheme be served on behalf of the N.W. Federation. It was stated that in view of the resolution to withdraw from the Conciliation scheme it would be necessary to have other machinery for dealing with matters which were now being dealt with by the Local Conciliation Boards, and the question of the establishment of an area council with local committees seemed to be the alternative. The Secretary was directed to obtain particulars of such machinery.

Workmen's Compensation.

The report of the Departmental Committee on Workmen's Compensation was presented by the Secretary, who referred to some of the recommendations of the Committee to the effect that (1) insurance companies should be limited to the extent of 30 per cent. of their income for profits, management expenses and commission; (2) every employer to be compulsorily insured: (3) increase in compensation for total and partial incapacity.

CONDITIONS AND WAGES ON PUBLIC WORKS CONTRACTS.

THE award of the Industrial Court has now been issued in the arbitration on the claim for an advance in wages of 4d. per hour for labourers employed by local authorities and contractors to local authorities engaged on such work as road and sewer construction. The areas concerned are the City and County of London and districts wholly or partly within the Metropolitan Police area. The new rates fixed by the award are as follows, to take effect from the first pay-day after August 10, 1920:—Bricklayer, 2s. 4d.; blacksmith, 2s. 3½d.; carpenter and joiner, 2s. 4d.; concrete leveller, 1s. 11d.; duct or earthenware drain layer, 2s.; fitter, 2s. 3½d.; granite mason (kerb, etc.), 2s. 4½d.; granite sett dresser, 2s. 3½d.; jointer, 2s.; kerb fixer, 2s. 3½d.; painter, 2s. 3d.; pavior, 2s. 3½d.; platelayer, 2s. to 2s. 1d.; platelayer's labourer, 1s. 11d.; rammerman, 2s.; scaffolder, 2s. 2d.; screeder, 2s.; steam-roller driver, 2s. 3d.; street mason and flag dresser, 2s. 3½d.; tarpot man, 1s. 11d.; timberman, 2s.; wood block layer, 2s.; watchman, 8s. 6d. minimum day or night; labourer, 1s. 11d. Men working in "boots," 1d. per hour extra. Workmen working in dirty or dangerous places are subject to special rates and conditions. The rates for boys are the following proportions of the labourers' rate per hour (1s. 11d.):—Boys 14 to 16 years, one-third; boys 16 to 18 years, one-half; boys 18 to 20 years, two-thirds.

The hours of labour and overtime rates are to remain as agreed on March 11, 1920, namely, 47 hours per week, and when overtime is worked at the request of the employer, or his agent, the following rates shall apply:—For the first two hours in any one day, time and a quarter; second two hours, time and a half; after that double time; Saturdays noon to 4 p.m. time and a half, after that double time; Sundays and Bank Holidays, double time. The working day to commence at 7.0 a.m., and end at 5.0 p.m. One and a half hours to be allowed for meals. Saturdays commence 7.0 a.m., and end noon. Half an hour to be allowed for breakfast.

INCREASE OF RENT: RULES OF PROCEDURE.

THE Rules under the Increase of Rent and Mortgage Interest (Restrictions) Act, 1920, came into force on July 15 last, and supersede all rules made under the previous Acts.

COURTS TO WHICH APPLICATIONS MADE: RENT.—By Rule 1 applications (*a*) relating to increases of rent under section 2, or section 9 (which relates to furnished lettings); (*b*) for the apportionment of rent or rateable value to ascertain the standard rent under section 12 subs. 3; (*c*) for leave to distrain under section 6; and (*d*) to determine in cases of intestacy which member of a tenant's family is a "tenant" under section 12, 1 (*g*), are to be made to the county court in the district of which the premises are situated, but an application under section 5, subs. 6 for compensation where a landlord has obtained possession by misrepresentation or concealment of facts must be made to the court in which the order or judgment complained of was made.

MORTGAGES.—With reference to mortgages, by Rule 2, applications under section 7 proviso (ii), where a mortgagee alleges his security is seriously diminishing, may be made either (*a*) in the court in the district in which the property is situated, or (*b*) in the court in the district in which the mortgagor resides or carries on business or (*c*) if the mortgagee resides or carries on business in the district of any court mentioned in section 84 of the County Courts Act, 1888, and the mortgagor resides or carries on business in the district of any other court mentioned in the same section, the application can be made in either of the courts. In Rule 3 there are some complicated provisions relating to the Courts Emergency Powers Act, 1914, and the Rules made thereunder. These may be summarised as follows: In the case of mortgages of leasehold interests to which the Increase of Rent Act, 1920, applies the Emergency Powers rules shall cease to apply. Thus, where an application is made under Rule 2, Increase of Rent Rules, to foreclose a mortgage and the mortgage is within the Increase of Rent Act, an application under the latter Act shall be deemed to be also an application under the Courts Emergency Powers Act, and no separate proceedings are necessary. If, however, during the progress of the proceedings it appears that the Increase of Rent Act does not apply and that consequently leave would be required under the Courts Emergency Powers Act, then if the principal sum secured by the mortgage does not exceed £500 the application may proceed under the Courts Emergency Powers Act and the County Court Rules made thereunder. If the sum exceeds £500, unless the respondent consents, the application shall not proceed. If it is made to appear to the Court that neither of the above Acts applies to the mortgage, then the application shall be struck out.

POWER TO IMPOSE CONDITIONS.—Rule 12 provides: "On an application for an order authorising a mortgagee to call in and enforce a mortgage the court may, after considering all the circumstances of the case and the position of all the parties, make or refuse to make the order, subject to such conditions as the court may think fit." Some question may possibly arise whether this rule is *intra vires*, for the Act itself in section 7 proviso (ii) lays down the conditions under which an order under that proviso can be made: viz., that the order may be made so as not to take effect if the mortgagor within such time as the court directs pays to the mortgagee such portion of the principal sum secured as appears to the court to correspond to the diminution of the security. These rules are made under section 17, which provides that rules may be made to give effect to the Act and to regulate matters of procedure, and it may be a question whether they can confer on the courts an additional discretion to that

conferred by the Act in the absence of express authority in the Act.

PRIVATE HEARINGS.—Rule 3 provides that proceedings may be ordered to be heard in private, but this power is especially conferred upon the Lord Chancellor, who makes the rules, by section 17.

EVIDENCE.—The only other rule requiring particular notice is Rule 8, which provides that no affidavit in support of applications shall be used except by leave of the Court, but oral evidence must be offered in cases.

Rule 18 contains a general direction that where proceedings are taken in the county court for the recovery of rent of any premises to which the Act applies, or for the recovery of possession of any premises to which the Act applies, or for ejectment from any such premises, or for recovery of interest on a mortgage to which the Act applies, the court shall, before making an order, satisfy itself that the order may properly be made having regard to the provisions of the Act. Costs are dealt with in Rule 16.

LABOUR FOR HOUSING.

THE new proposals of the Government for expediting housing schemes, which are the outcome of the rejection of the previous terms by the Resettlement Committee of the Industrial Council for the Building Industry at a conference between that body and representatives of the Government on August 17, have not yet officially been made public; it is, however, stated that they are in the following terms, which, we believe, are substantially correct :—

The new proposals recommend that the number of apprentices shall be double that allowed under ordinary rules, with special consideration for ex-Service men, and that housing shall have the first call on labour. The proposals carry with them invitations to the trade also to make suggestions :—(1) To check building which would impede work on housing; (2) to investigate the high cost of building; and (3) to provide an alternative to the rejected payment by results scheme. The Government cannot regard the suggestions of the Resettlement Committee as adequate, as they would bring the number of apprentices only to the normal level, and would not be sufficiently attractive to older apprentices. With a view, therefore, to the rapid augmentation of labour for housing, it is proposed that the number of apprentices in the first year be twice that ordinarily allowed under the existing regulations, and with regard to ex-Service men: (1) That the age shall be 26 years; (2) that the period of apprenticeship be three years, with a probationary period of three months; (3) that the minimum wage be 50 per cent. of the journeyman's wage for the first six months, and 75 per cent. in the second six months of indenture; and (4) that ex-Service men who were formerly builders' labourers be paid 70 per cent. of the journeyman's wage at the commencement of indenture. Trade tests every six months are suggested.

In view of the opposition to the Government's proposal to offer inducement to labour to work on housing schemes, an invitation is now extended for help in the steps which the Government proposes to take to check building where it is detrimental to the progress of housing. The Government will also avail itself of assistance in investigating the present high cost of building. Finally, it is proposed that some alternative to the rejected scheme of payment by results should be formulated by the Resettlement Committee, with a view to securing an increase in output.

The General Electric Co., Ltd., of 67, Queen Victoria-street, E.C., has issued two small booklets illustrating and describing various types of electric vacuum cleaners and electric fires.

RATES OF WAGES IN THE BUILDING TRADE.

THE following are the present rates of wages in the building trade in the principal towns of England and Wales. It must be understood that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur :—

	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Masons' Labourers.	Bricklayers' Labourers.	Plasterers' Labourers.
Aberdare	2/4	2/4	2/4	2/4	2/4	2/4	2/4		2/1	
Accrington	2/2½	2/2½	2/2½	2/2½	2/2½	2/2½	2/2½		1/10½–1/11	
Altrincham	2/4	2/4	2/4	2/4	2/4	2/4	2/4		2/0–2/0½	
Ashton-under-Lyne	2/4	2/4	2/4	2/4	2/4	2/5	2/4		2/0–2/0½	
Barnsley	2/2½	2/2½	2/2½	2/2½	2/2½	2/2½	2/2½		1/11½	
Barrow-in-Furness	2/4	2/4	2/4	2/4	2/4	2/4	2/4		2/0–2/0½	
Barry	2/4	2/4	2/4	2/4	2/4	2/4	2/4		2/1	
Bath	1/10½	1/10½	1/10½	1/10½	1/10½	1/10½	1/10½	1/7½	1/7½	1/7½
Bedford	1/11	1/11	1/11	1/11	1/11	1/11	1/11		1/8	
Birkenhead	2/4	2/4	2/4	2/4	2/4	2/4	2/4		2/0½	
Birmingham	2/4	2/4	2/4	2/4	2/4	2/5	2/4		2/1	
Bishop Auckland	2/4	2/4	2/4	2/4	2/4	2/4	2/4		2/1	
Blackburn	2/2½	2/2½	2/2½	2/2½	2/2½	2/2	2/2½		1/10½–1/11	
Blackpool	2/2½	2/2½	2/2½	2/2½	2/2½	2/2½	2/2½		1/10½–1/11	
Bolton	2/4	2/4	2/4	2/4	2/4	2/3	2/4		2/0–2/0½	
Bournemouth	2/-	2/-	2/-	2/-	2/-	2/-	2/-		1/9	
Bradford	2/4	2/4	2/4	2/4	2/4	2/4	2/4		2/1	
Bridgwater	1/9	1/9	1/9	1/9	1/9	1/9	1/9	1/6	1/6	1/6
Brighton	2/-	2/-	2/-	2/-	2/-	2/-	2/-		1/9	
Bristol	2/-	2/-	2/-	2/-	2/-	2/-	2/-		1/9	
Burnley	2/2½	2/2½	2/2½	2/2½	2/2½	2/2½	2/2½		1/10½–1/11	
Burton-on-Trent	2/2½	2/2½	2/2½	2/2½	2/2½	2/2½	2/2½		1/11½	
Bury	2/4	2/4	2/4	2/4	2/4	2/4	2/4		2/0–2/0½	
Cambridge	2/-	2/-	2/-	2/-	2/-	2/-	2/-		1/9	
Cardiff	2/4	2/4	2/4	2/4	2/4	2/4	2/4		2/1	
Chatham	1/11	1/11	1/11	1/11	1/11	1/11	1/11		1/8	
Chelmsford	1/11	1/11	1/11	1/11	1/11	1/11	1/11		1/8	
Cheltenham	1/10½	1/10½	1/10½	1/10½	1/10½	1/10½	1/10½	1/7½	1/7½	1/7½
Chester	2/2½	2/2½	2/2½	2/2½	2/2½	2/2½	2/2½		1/10½–1/11	
Chesterfield	2/4	2/4	2/4	2/4	2/4	2/-	2/4		2/1	
Colchester	1/11	1/11	1/11	1/11	1/11	1/11	1/11		1/8	
Coventry	2/4	2/4	2/4	2/4	2/4	2/4	2/4		2/1	
Crewe	2/-	2/-	2/-	2/-	2/-	2/-	2/-		1/8–1/8½	
Darlington	2/4	2/4	2/4	2/4	2/4	2/4	2/4		2/1	
Derby	2/1	2/4	2/4	2/4	2/4	2/4	2/4		2/1	
Doncaster	2/2½	2/2½	2/2½	2/2½	2/2½	2/2½	2/2½		1/11½	
Dudley	2/2½	2/2½	2/2½	2/2½	2/2½	1/10½	2/2½		1/11½	
Durham	2/4	2/4	2/4	2/4	2/4	2/4	2/4		2/1	
East Glam. and Mon. Valleys	2/4	2/4	2/4	2/4	2/4	2/4	2/4		2/1	
Exeter	1/9	1/9	1/9	1/9	1/9	1/9	1/8	1/6	1/6	1/6
Folkestone	1/11	1/11	1/11	1/11	1/11	1/11	1/11		1/8	
Gloucester	1/10½	1/10½	1/10½	1/10½	1/10½	1/10½	1/9½	1/7½	1/7½	1/7½
Grantham	2/2½	2/2½	2/2½	2/2½	2/2½	2/2½	2/2½		1/11½	
Grays	2/4	2/4	2/4	2/4	2/4	2/4½	2/3		2/1	
Grimsby	2/4	2/4	2/4	2/4	2/4	2/4	2/4		2/1	
Great Yarmouth	1/11	1/11	1/11	1/11	1/11	1/11	1/11		1/8	
Guildford	1/11	1/11	1/11	1/11	1/11	1/11	1/11		1/8	
Halifax	2/4	2/4	2/4	2/4	2/4	2/4	2/4		2/1	
Harrogate	2/2½	2/2½	2/2½	2/2½	2/2½	2/2½	2/2½		1/11½	
Hartlepools	2/4	2/4	2/4	2/4	2/4	2/4	2/4		2/1	
Hastings	1/11	1/11	1/11	1/11	1/11	1/11	1/11		1/8	
Hereford	1/10½	1/10½	1/10½	1/10½	1/10½	1/10½	1/9½	1/7½	1/7½	1/7½
Huddersfield	2/4	2/4	2/4	2/4	2/4	2/4	2/4		2/1	
Hull	2/4	2/4	2/4	2/4	2/4	2/4	2/4		2/1	
Ipswich	2/-	2/-	2/-	2/-	2/-	2/-	2/-		1/9	
Lancaster	2/2½	2/2½	2/2½	2/2½	2/2½	2/2½	2/2½		1/10½–1/11	
Leamington Spa	2/2½	2/2½	2/2½	2/2½	2/2½	2/2½	2/2½		1/11½	
Leeds	2/4	2/4	2/4	2/4	2/4	2/4	2/4		2/1	
Leicester	2/4	2/4	2/4	2/4	2/4	2/4½	2/4		2/1	
Lichfield	2/2½	2/2½	2/2½	2/2½	2/2½	2/2½	2/2½		1/11½	
Lincoln	2/4	2/4	2/4	2/4	2/4	2/-	2/4		2/1	
Liverpool	2/4	2/4	2/4	2/4	2/4	2/4	2/4		2/0½	
Llanelly	2/4	2/4	2/4	2/4	2/4	2/4	2/4		2/1	
London	2/4	2/4	2/4	2/4	—	2/4½	2/3		2/1	
Loughborough	2/4	2/4	2/4	2/4	2/4	2/4½	2/4		2/1	
Luton	2/-	2/-	2/-	2/-	2/-	2/-	2/-		1/9	
Maidstone	1/11	1/11	1/11	1/11	1/11	1/11	1/11		1/8	
Manchester	2/4	2/4	2/4	2/4	2/4	2/3	2/4		2/0–2/0½	
Mansfield	2/2½	2/2½	2/2½	2/2½	2/2½	2/3	2/2½		1/11½	
Merthyr Tydfil	2/4	2/4	2/4	2/4	2/4	2/4	2/4		2/1	
Middlesbrough	2/4	2/4	2/4	2/4	2/4	2/4	2/4		2/1	
Newcastle-on-Tyne	2/4	2/4	2/4	2/4	2/4	2/4	2/4		2/1	
Newport, Mon.	2/4	2/4	2/4	2/4	2/4	2/4	2/4		2/1	
Northampton	2/2½	2/2½	2/2½	2/2½	2/2½	2/2½	2/2½		1/11½	
Norwich	2/-	2/-	2/-	2/-	2/-	2/-	2/-		1/9	
Nottingham	2/4	2/4	2/4	2/4	2/4	2/4½	2/4		2/1	
Oldham	2/4	2/4	2/4	2/4	2/4	2/4	2/4		2/0–2/0½	
Oxford	2/-	2/-	2/-	2/-	2/-	2/-	2/-		1/9	
Plymouth	2/-	2/-	2/-	2/-	2/-	2/-	1/11	1/9	1/9	1/9
Pontypridd	2/4	2/4	2/4	2/4	2/4	2/4	2/4		2/1	
Portsmouth	2/-	2/-	2/-	2/	2/-	2/-	2/-		1/9	
Preston	2/2½	2/2½	2/2½	2/2½	2/2½	2/2½	2/2½		1/10½–1/11	
Reading	2/-	2/-	2/-	2/-	2/-	2/-	2/-		1/9	
Rochdale	2/4	2/4	2/4	2/4	2/4	2/5	2/4		2/0–2/0½	
Rochester	1/11	1/11	1/11	1/11	1/11	1/11	1/11		1/8	
Rugby	2/2½	2/2½	2/2½	2/2½	2/2½	2/2½	2/2½		1/11½	
St. Albans	2/-	2/-	2/-	2/-	2/-	2/-	2/-		1/8	
St. Helen's	2/4	2/4	2/4	2/4	2/4	2/4	2/4		2/0–2/0½	
Scarborough	2/2½	2/2½	2/2½	2/2½	2/2½	2/2½	2/2½		1/11½	
Sheffield	2/4	2/4	2/4	2/4	2/4	2/4	2/4		2/1	
Shrewsbury	2/2½	2/2½	2/2½	2/2½	2/2½	1/10½	2/2½		1/11½	
Southampton	2/-	2/-	2/-	2/-	2/-	2/-	2/-		1/9	
Southend-on-Sea	2/0½	2/0½	2/0½	2/0½	2/0½	2/0½	1/11½		1/9	
Southport	2/4	2/4	2/4	2/4	2/4	2/-	2/4		2/0–2/0½	
South Shields	2/4	2/4	2/4	2/4	2/4	2/4	2/4		2/1	
Stockport	2/4	2/4	2/4	2/4	2/4	2/4	2/4		2/0–2/0½	
Stockton-on-Tees	2/4	2/4	2/4	2/4	2/4	2/4	2/4		2/1	
Stoke-on-Trent	2/2½	2/2½	2/2½	2/2½	2/2½	1/10½	2/2½		1/11½	
Stroud	1/10½	1/10½	1/10½	1/10½	1/10½	1/10½	1/10	1/7½	1/7½	1/7½
Sunderland	2/4	2/4	2/4	2/4	2/4	2/4	2/4		2/1	
Swansea	2/4	2/4	2/4	2/4	2/4	2/4	2/4		2/1	
Taunton	1/9	1/9	1/9	1/9	1/9	1/9	1/9	1/6	1/6	1/6
Torquay	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/5	1/5	1/5
Wakefield	2/4	2/4	2/4	2/4	2/4	2/4	2/4		2/1	
Walsall	2/2½	2/2½	2/2½	2/2½	2/2½	2/3½	2/2½		1/11½	
Warrington	2/4	2/4	2/4	2/4	2/4	2/4	2/4		2/0–2/0½	
West Bromwich	2/4	2/4	2/4	2/4	2/4	2/4	2/4		2/1	
Wigan	2/4	2/4	2/4	2/4	2/4	2/4	2/4		2/0–2/0½	
Windsor	2/-	2/-	2/-	2/-	2/-	2/-	2/-		1/9	
Wolverhampton	2/2½	2/2½	2/2½	2/2½	2/2½	2/2½	2/2½		1/10½	
Worcester	2/2½	2/2½	2/2½	2/2½	2/2½	2/2½	2/2½		1/11½	
York	2/2½	2/2½	2/2½	2/2½	2/2½	2/2½	2/2½		1/11½	

CONTRACTS, COMPETITIONS, &c.

For some contracts still open, but not included in this List, see previous issues. Those with an asterisk (*)are advertised in this number. Contracts xxviii; Competitions iv; Public Appointments lx; Sales by Auction lxiii. Certain conditions beyond those given in the following information are imposed in some cases such as that advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in; the name and address at the end is the person from whom or place where, quantities, forms of tender, &c., may be obtained.

BUILDING AND PAINTING.

SEPTEMBER 3.—**East Barnet.**—HOUSES.—Erection of about 108 houses on Nickells Field Estate, for the U.D.C. Mr. T. A. Buckley, Clerk, Council Offices, Station-road, New Barnet. Deposit £2 2s.

SEPTEMBER 3.—**Nottingham.**—HOUSES.—Erection of 200 houses on the Gordon-road and Carlton-road sites, for the T.C. Housing Surveyor, Trinity-square, Nottingham. Deposit £1 1s.

SEPTEMBER 3.—**Whitland.**—COTTAGE, &C.—Erection of manager's cottage and farm building at Tynewydd, Whitland, Carmarthenshire, for the C.C. Small Holdings Architect, Shire Hall, Carmarthen.

SEPTEMBER 4.—**Ham, Surrey.**—HOUSES.—Erection of 20 houses at Ham, for the U.D.C. Clerk's Office, 16, The Green, Richmond, Surrey.

SEPTEMBER 4.—**Hammersmith.**—ADDITION.—Erection of an additional story to the workshops and accumulator room at the Electricity Works, for the B.C. Borough Engineer, Hammersmith, W. 6.

SEPTEMBER 4.—**Llandovery.**—ALTERATIONS &C.—Alterations and repairs, together with painting and decorating Salem Congregational Chapel throughout, as well as the installation of heating apparatus. Mr. J. Owen Parry, architect, Ammanford.

SEPTEMBER 4.—**London.**—ADDITIONS.—Proposed garage at Great Church-lane Depot, Hammersmith. Mr. L. Gordon, Town Clerk, Town Hall, Hammersmith, W.

SEPTEMBER 4.—**New Romney.**—PAINTING.—Repainting and other repairs to the Town Hall and Assembly Rooms, for the T.C. Mr. W. Lamacraft, Town Clerk, Town Hall, New Romney.

*SEPTEMBER 4.—**Whitehaven.**—HOUSES.—Erection of 216 houses, for the T.C. Mr. J. S. Stout architect, Whitehaven.

SEPTEMBER 6.—**Audenshaw**—HOUSES.—Erection of 50 houses, for the U.D.C. Messrs. Lindley & Gibson, Market-avenue, Ashton-under-Lyne. Deposit £2 2s.

SEPTEMBER 6.—**Bradfield.**—HOUSES.—Erection of houses in the Parishes of Pangbourne and Stratfield Mortimer, for the R.D.C. Mr. W. Jones, Clerk, Council Offices, 172, Friar-street, Reading. Deposit, £1 1s.

SEPTEMBER 6.—**Bradford.**—PAINTING.—Painting, &c. (1) Kirkgate Market: External painting, shop fronts; (2) Rawson-place Market: External painting; (3) James-street Market: Internal and external painting. City Architect, Town Hall, Bradford.

SEPTEMBER 6.—**Bradford.**—ALTERATIONS.—Alterations at the Central Fire Station, Nelson-street, for the T.C. City Architect, Town Hall, Bradford.

SEPTEMBER 6.—**Daventry.**—WINDOWS.—Removal of 15 old windows and substitution of new windows at the workshop of the Board of Guardians. Master, at the Workhouse, Daventry.

SEPTEMBER 6.—**Farsley.**—HOUSES.—Erection of 32 houses, for the U.D.C. Mr. P. T. Runton, District Bank Chambers, Bradford. Deposit, £2 2s.

SEPTEMBER 6.—**Foleshill.**—HOUSES.—Erection of 30 houses in the Parish of Walsgrave-on-Sowe, for the R.D.C. Mr. A. E. Newey, Surveyor, Council Offices, Little Heath, Foleshill, near Coventry. Deposit, £2.

SEPTEMBER 6.—**Hull.**—PAINTING.—Inside painting at the Workhouse, Beverley-road, Hull, for the Board of Guardians. Mr. T. Beecroft Atkinson, Trinity House-lane, Hull.

SEPTEMBER 6.—**Kensington.**—Erection of a cleaning station, for the Royal Borough. Borough Engineer and Surveyor, Town Hall, Kensington High-street. Deposit, £2 2s.

SEPTEMBER 6.—**Manchester.**—HOUSES.—The Alkrington Tenants, Ltd. (Public Utility Society) invite tenders for the construction of their 400-house scheme. City Office, No. 55, Market-street, Manchester.

SEPTEMBER 6.—**Morley.**—PAINTING.—Painting of the large greenhouse at Dartmouth Park, for the T.C. Mr. F. Turner, Borough Engineer, Town Hall, Morley.

SEPTEMBER 6.—**Ongar.**—PAINTING, &C.—External repair, cleaning and painting of the Children's Homes, Chipping Ongar, for the Hackney Board of Guardians. Mr. Frank R. Coles, Clerk, Hackney Union, 2, Sidney-road, Homerton, E. 9.

SEPTEMBER 6.—**Southend-on-Sea.**—TEMPORARY WOODEN BUILDINGS.—Erection and completion of a wood frame temporary building, to be used as a school clinic, adjoining Victoria-avenue. Borough Engineer, Mr. R. H. Dyer, M.Inst.M. and Cy. E., Municipal Buildings. Deposit, £1.

SEPTEMBER 6.—**Wealdstone.**—HOUSES.—Erection of (a) 16 houses in Montrose-road, and (b) 23 non-parlour houses in Montrose-road, for the U.D.C. Mr. H. Walker, Council Offices, Wealdstone. Deposit £2 2s.

SEPTEMBER 6.—**Weybridge.**—HOUSES.—Erection of 100 houses, for the U.D.C. Deposit £2 2s.

SEPTEMBER 6.—**Weymouth.**—HOUSES.—Erection of five pairs of semi-detached cottages in the parish of Preston, for the R.D.C. Mr. G. A. Andrews, 157, Dorchester-road, Weymouth. Deposit £1 1s.

SEPTEMBER 6.—**Wortley.**—HOUSES.—Erection of 54 houses at Tankersley, for the R.D.C. Mr. Wynyard Dixon, Hartshead, Sheffield. Deposit, £2 2s.

SEPTEMBER 7.—**Ampthill.**—HOUSES.—Erection of houses at Westoning, Flitwick-road (6); Toddington, Dunstable-road (8), for the R.D.C. Mr. Leonard Foster, surveyor, The Avenue, Flitwick.

SEPTEMBER 7.—**Bethnal Green.**—ALTERATIONS.—Dividing, for isolation purpose, one of the large wards in Infirmary, Cambridge-road, E. 2, into six smaller wards. Deposit £1. Mr. C. Faulkner Jones, Clerk to the Guardians Bishop's-road.

SEPTEMBER 7.—**Bethnal Green. E.**—Repainting and renovating certain parts of the interior and exterior of the schools, High-road, Leytonstone. Mr. C. Faulkner Jones, Clerk to the Guardians, Guardians Offices, Bishop's-road, Bethnal Green, E. 2. Deposit £5.

SEPTEMBER 7.—**Bethnal Green.**—PAINTING.—Painting interior of laundry at Waterloo House, for the Board of Guardians. Mr. C. F. Jones, Clerk, Guardians Office, Bishop's-road, Bethnal Green, E.

SEPTEMBER 7.—**Herne Bay.**—PAINTING, &C.—For cleaning, painting and repairs at St. Anne's Home, Herne Bay, for the Met. Asylums Board. Office of the Board, Embankment, E.C. 4. Deposit £1.

SEPTEMBER 7.—**London and Dartford.**—VARIOUS WORKS.—(1) Additional covering-in to yard at the Mead Ambulance Station, Fulham; (2) alterations to entrance at the South-Western Ambulance Station, London-road, S.W.; (3) New iron fencing at Long Reach Extension Hospital, Dartford; (4) repairs to roads at the North-Eastern Fever Hospital, St. Ann's-road, South Tottenham, N.15, for the Met. Asylums Board. Office of the Board, Embankment, E.C. 4. Deposit £1 1s. each work.

SEPTEMBER 7.—**Maldon.**—HOUSES.—Erection of 6 houses at Steeple, 20 at Goldhanger and 28 at Tollesbury, for the R.D.C. Mr. Almond, surveyor, 6, Market-place, Maldon, Essex.

SEPTEMBER 7.—**Manchester.**—WALL.—Taking down and re-building main wall at Rusholme Public Hall, for the T.C. City Architect, Town Hall, Manchester. Deposit, £1 1s.

SEPTEMBER 8.—**Brighton.**—REPAIRS, &C.—For ordinary works and repairs in the Brighton and Hove District, for H.M. Office of Works. Director of Contracts, H.M. Office of Works, Storey's-gate, S.W.

SEPTEMBER 8.—**Denton.**—PAINTING.—Painting the public street lamps and hydrant plates, for the U.D.C. Mr. J. B. Cooke Surveyor, Town Hall, Denton, near Manchester.

SEPTEMBER 8.—**London.**—Erection of alternatively one or five electric light sub-stations on the Wormholt Housing Estate, Ducane-road, W. 12. Mr. R. Hampton Lucas, M.Inst.C.E., Borough Engineer and Surveyor, Town Hall, Hammersmith, W.

SEPTEMBER 8.—**Todmorden.**—HOUSES.—Erection of 12 houses, for the T.C. Borough Engineer, Municipal Offices, Rise-lane, Todmorden.

SEPTEMBER 9.—**Bermondsey.**—FLATS.—Erection of flats on the Silver-street area site, for the B.C. Mr. F. Ryall, Town Clerk, Town Hall, Spa-road, Bermondsey, S.E. 16.

SEPTEMBER 9.—**Bradford.**—BOILER HOUSE—Erection of boiler-house, &c., for the Electricity Dept. Mr. T. Roles, City Electrical Engineer, Bradford. Deposit £2 2s.

*SEPTEMBER 9.—**Kettering.**—HOUSES.—Erection of a part or the whole of 219 houses for the R.D.C. Messrs. Blackwell & Riddey, Gold-street Chambers, Kettering.

SEPTEMBER 9.—**London.**—BUILDING.—Forming caretaker's quarters at the Guardian's Offices, Ufford-street, Blackfriars, S.E. Mr. A. Saxon Snell, 9, Bentinck-street, W. 1. Deposit £1.

SEPTEMBER 9.—**Mile End Old Town.**—Adaptation and conversion of twelve dormitories and other rooms in the Eastern block, for the Guardians of the Poor of the Hamlet of Mile End Old Town. Mr. Edmund J. Harrison, Lic.R.I.B.A., No. 23, Berkeley-road, Crouch End, N. 8.

SEPTEMBER 9.—**Warsop.**—HOUSES.—Erection of 112 houses, for the U.D.C. Messrs. Vallance & Westwick, White Hart Chambers, Mansfield. Deposit £2 2s.

SEPTEMBER 9.—**West Ham.**—WORKSHOP.—Erection of a workshop at the Children's Homes, Aldersbrook-road, Wanstead, E., for the West Ham Board of Guardians. Mr. Francis J. Sturdy, F.R.I.B.A., 45, Finsbury-pavement, E.C. 2.

SEPTEMBER 10.—**Lewisham.**—PAINTING.—For painting, &c., at St. John's Hospital, Morden-hill, Lewisham, S.E. Hon. Secretary at the hospital.

SEPTEMBER 10.—**Manchester.**—ROOF.—Construction of a roof over Jubilee-square, Smithfield Market, for the T.C. City Architect, Town Hall, Manchester. Deposit, £1 1s.

SEPTEMBER 10.—**Swindon.**—FARM BUILDINGS.—Erection of six sets of farm buildings on Elcombe Estate, for the Wilts. C.C. Mr. J. G. Powell, County Surveyor, Trowbridge.

SEPTEMBER 11.—**Lochgelly.**—HOUSES.—Erection of 66 and 40 houses in two contracts, for the T.C. Town House, Lochgelly. Deposit, £2 2s.

SEPTEMBER 11.—**Marston Sicca.**—COTTAGES.—Erection of 14 cottages, for the R.D.C. Mr. M. J. Harvey, architect, 5, Shakespeare-chambers, Stratford-on-Avon. Deposit, £2 2s.

SEPTEMBER 11.—**Rockliffe.**—CONVERSION.—Conversion of an existing building at Rockliffe into a Parish Hall. Messrs. Dixon & Mitchell, Devonshire-street, Carlisle.

SEPTEMBER 13.—**Ashbourne.**—DEPOT, ETC.—Erection of Depot Buildings and one pair of cottages on County Council's site at Ashbourne. Mr. J. W. Horton, County Surveyor, County Offices, St. Mary's Gate, Derby.

SEPTEMBER 13.—**Bromley.**—Addition to bay window to Superintendent Nurse's Quarters, and the addition of a bay window and the conversion of a room to form a nurses' sitting-room, for the Guardians of the Bromley Union. Mr. F. Danby Smith, architect, Parliament Mansions, Victoria-street, S.W. 1.

SEPTEMBER 13.—**Ellesmere.**—HOUSES.—Erection of 24 houses, for the R.D.C. Messrs. Berrington, Son & Watney, architects, Prudential-chambers, Wolverhampton. Deposit, £2 2s.

SEPTEMBER 13.—**Macclesfield.**—HOUSES.—Erection of eight houses (in pairs), at Rainow, for the R.D.C. Mr. Fred Fowler, architect, Parr's Bank-buildings, Macclesfield. Deposit, £2 2s.

*SEPTEMBER 13.—**Morecambe.**—HOUSES.—Erection of houses, for the B.C. Mr. J. W. Hipwood Borough Surveyor, Town Hall, Morecambe. Deposit £2 2s.

SEPTEMBER 13.—**Wilton.**—HOUSES.—Erection of 50 houses at Bemerton, for the R.D.C. Mr. A. C. Bothams, architect, 32, Chipper-lane, Salisbury.

SEPTEMBER 13.—**Wilton.**—HOUSES.—Erection of 20 houses at Bishopstone, 16 at Broadchalke, 6 at Bowerchalke, 6 at Ebbesbourne Wake, 6 at Burcombe, 6 at Barford St. Martin, and 4 at Baverstock, for the R.D.C. Mr. J. G. P. Meeden, Ingram House, 165, Fenchurch-street, London, E.C. Deposit, £5 5s.

SEPTEMBER 13.—**Woolwich.**—ENGINE HOUSE, &C.—Erection of engine house, cottage, &c., at Shooter's-hill, Woolwich, for the Metropolitan Water Board. Offices of the Board, Chief Engineer's Department, 173, Rosebery-avenue, E.C. 1. Deposit £5.

SEPTEMBER 14.—**Dalbeattie.**—HOUSES.—Erection of 12 houses, for the T.C. Mr. J. Little, Town Clerk, Dalbeattie. Deposit, £1 1s.

SEPTEMBER 14.—**Elstree.**—HOUSES.—Erection of 20 houses at Watling-street. Deposit £2 2s. Mr. H. W. Poole, Clerk to the U.D.C., 93, High-street, Barnet.

SEPTEMBER 14.—**Slaithwaite.**—HOUSES, &C.—Construction of a new street and the erection of 24 houses, for the U.D.C. Messrs. Lunn & Kaye, architects, Milnsbridge.

SEPTEMBER 15.—**Bermondsey.**—PAINTING.—Repair and repainting works at the Public Libraries, Spa-road and Tooley-street, S.E., for the B.C. Mr. F. Ryall, Town Clerk, Town Hall, Spa-road, S.E.

SEPTEMBER 15.—**Chiswick.**—Erection of four blocks of four flats each, one block of two flats (two at Thames-road and three at Paxton-road), for the District Council. Surveyor, Town Hall, Chiswick.

SEPTEMBER 15.—**Easingwold.**—HOUSES.—Erection of 20 houses at Easingwold, 3 at Tollerton and 8 at Skipton, for the R.D.C. Mr. H. Walker, High-street Easingwold. Deposit £1 1s.

SEPTEMBER 15.—**Haltwhistle.**—HOUSES, &C.—Erection of 139 houses at Greencroft and construction of roads and sewers, for the R.D.C. Mr. R. E. Hastewell, A.R.I.B.A., Westgate, Haltwhistle. Deposit, £2 2s.

SEPTEMBER 15.—**Surrey.**—COTTAGES.—Erection of three workmen's cottages at Bagshot, Surrey. County Surveyor, County Hall, Kingston-on-Thames. Deposit £1 1s.

*SEPTEMBER 16.—**Bermondsey.**—REPAIRS AND REDECORATION.—At the Shirley Schools, Wickham-road, Shirley, near Croydon, for the Guardians of the Parish. Messrs. Newman & Newman, architects, 283, Tooley-street, S.E. 1. Deposit £5

SEPTEMBER 16.—**Greenwich**—ADAPTATION.—Adaptation of premises in Maze-hill, for the purposes of a Maternity Centre, for the B.C. Town Clerk, Town Hall, Greenwich. Deposit £2 2s.

*SEPTEMBER 16.—**Hammersmith.**—HOUSES.—Erection of six pairs of improved "B4;" type houses on the Wormholt Housing Estate. Town Clerk, Town Hall, Hammersmith, W.6.

SEPTEMBER 16.—**Strood.**—PAINTING.—External painting, &c., at the houses at Wainscott, Frindsbury Extra, for the R.D.C. Mr. J. E. Povey, Clerk, Union Offices, Strood.

SEPTEMBER 16.—**Whitehaven.**—HOUSES.—Erection of 118 houses at Moresby, for the R.D.C. Surveyor to the Council, Union Hall, Whitehaven. Deposit, £2 2s.

SEPTEMBER 16.—**Windlesham.**—HOUSES, &C.—Erection of 24 houses, with roads, sewers, &c., for the U.D.C. Mr. E. T. Close, Clerk, Council Offices, Bagshot, Surrey. Deposit £2 2s.

SEPTEMBER 17.—**Charlton Musgrove.**—HOUSE.—Erection of a teacher's dwelling-house, in connection with the Charlton Musgrove Council School, for the Somerset E.C. Mr. A. J. Pictor, architect, Bruton.

*SEPTEMBER 18.—**Durham.**—COTTAGES AND OUT-BUILDINGS.—Erection of Cottages and Outbuildings, at Stockton, Darlington and West Hartlepool. Mr. Wm. Fleming, Junr., County Land Agent, Small Holdings Department, Shire Hall, Durham.

SEPTEMBER 18.—**Enfield.**—CONVENIENCE.—Erection of two public conveniences, for the U.D.C. Surveyor Public Offices, Enfield.

SEPTEMBER 20.—**Stirling.**—HOUSES.—Erection of houses at Bandeath Royal Naval Ordnance Depot, near Stirling, for H.M. Office of Works. Principal Architect, H.M. Office of Works, 3, Parliament-square, Edinburgh. Deposit, £1 1s.

SEPTEMBER 21.—**Whitchurch (Hants.).**—HOUSES &C.—Erection of 30 houses at Whitchurch, 12 at Overbourne, and 8 at St. Mary Bourne, for the R.D.C. Mr. G. Allen, architect, 435, Strand, London, W.C. Deposit, £1 1s.

*SEPTEMBER 23.—**Lewisham, S.E.**—CLOAK ROOM & ROADWAY THROUGH CORRIDOR.—(*a*) Erection of a ladies' cloak room. (*b*) Forming an opening and roadway through corridor for the Guardians of the Poor of the Borough of Lewisham. Guardians' Offices, 394, High-street, Lewisham, S.E. 13. Deposit £1.

✱SEPTEMBER 28.—**Sutton Bridge.**—HOUSES.—Erection of eight houses in Prince's-street, Sutton Bridge, for the U.D.C. Messrs. A. W. & H. J. Wilson, architects to the Council, District-chambers Cumbergate, Peterborough. Deposit, £1 1s.

✱SEPTEMBER 30.—**Salop.**—POST OFFICE.—Erection of a new Post Office at Wellington. The Secretary, H.M. Office of Works, Storey's Gate, Westminster, S.W. 1.

✱NO DATE.—**Salisbury.**—COTTAGES.—Erection of 13 pairs of cottages at various districts for the R.D.C. Mr. M. Harding, architect, 65, New-street, Salisbury.

FURNITURE, MATERIALS, etc.

SEPTEMBER 3.—**Luton.**—FURNITURE.—Supply of school furniture to the Education Committee. Mr. P. J. Carter, Education Sec., 3, Manchester-street, Luton.

SEPTEMBER 6.—**London.**—FURNITURE.—Supply to H.M. Office of Works of (*a*) kitchen forms, and (*b*) linesmen's lockers. Controller of Supplies, H.M. Office of Works, King Charles-street, Westminster, S.W.

SEPTEMBER 13.—**Sevenoaks.**—Granite, tar macadam and dehydrated tar, for the U.D.C. Mr. E. Pawley, surveyor, Argyle-road, Sevenoaks.

SEPTEMBER 14.—**Manchester.**—TRAMWAY MATERIALS.—Supply of (a) steel girder tramway rails; (b) permanent way special track work. Mr. J. M. McElroy, General Manager, Corporation Tramways, 55, Piccadilly, Manchester. Deposit £1 1s.

SEPTEMBER 18.—**Tetbury.**—ROAD MATERIAL.—Supply of road materials to the U.D.C. Mr. T. V. H. Davison, Surveyor, Urban District Council Offices, Tetbury, Glos.

ENGINEERING, IRON AND STEEL.

SEPTEMBER 6.—**Newcastle-on-Tyne.**—QUAY.—Construction and maintenance of a reinforced concrete quay in the Hennebique system, 665 feet in length, on the River Tyne, for the T.C. City Engineer, Town Hall, Newcastle-upon-Tyne. Deposit £3 3s.

SEPTEMBER 6.—**Southampton.**—QUAY.—Strengthening the outer corners of the Town Quay, Southampton, for the Harbour Board. Engineer, Harbour Offices, Town Quay, Southampton. Deposit, £1.

SEPTEMBER 7.—**India**—BRIDGE WORK.—The South Indian Railway Company invite tenders for the supply of bridgework (10 spans 47 ft. each, deck type, plate girders, about 128 tons). Company's offices, 91, York-street, Westminster, S.W. 1. Charge 10s.

SEPTEMBER 7.—**London.**—QUAY, &C.—Construction of quay and the foundations of a warehouse, consisting of reinforced concrete piling, concrete quay wall, upfilling, &c., for the Butler's Wharf Co. Messrs. D. & C. Stevenson, 84, George-street, Edinburgh. Deposit £3 3s.

SEPTEMBER 7.—**London.**—WEIGHBRIDGE.—Providing and fixing a new 20-ton weighbridge at Caterham Mental Hospital, for the Metropolitan Asylums Board. Office of the Board, Embankment, E.C.4. Deposit £1.

SEPTEMBER 8.—**Madras.**—PIPES.—Supply of about 220 tons of cast-iron socket and spigot pipes, together with special castings, sluice valves, &c., for the Corporation. Messrs. James Mansergh & Sons, Agents to the Corporation of Madras, 5, Victoria-street, Westminster, S.W. Charge 5s.

SEPTEMBER 8.—**Manchester.**—FENCING.—For wrought-iron fencing on site of Cavalry Barracks, Hulme, for the T.C. City Engineer's Office, Town Hall, Manchester. Deposit £1 1s.

SEPTEMBER 8.—**Manchester.**—METERS.—Supply of ½ in., ¾ in., 1 in., 2 in., 3 in. and 4 in. low pressure water meters, for the T.C. Secretary, Waterworks Offices, Town Hall, Manchester.

SEPTEMBER 8.—**Manchester.**—PIPES.—Supply to the Waterworks Committee of (*a*) about 400 tons of cast-iron water pipes, 3 in. and 4 in. diameter, and about 50 tons of irregulars; (*b*) 100 tons of cast-iron hydraulic pipes 1¼ in. to 6 in. diameter, and about 6 tons of irregulars; (*c*) 6 tons of hydraulic bolts, nuts and washers; (*d*) 200 sluice valves, 3 in. to 12 in. diameter; (*e*) 30 hydraulic valves, 1¼ in. to 5 in. diameter. Secretary, Waterworks Offices, Town Hall, Manchester.

SEPTEMBER 8.—**Wandsworth.**—HOT WATER SUPPLY.—For new water supply to tower tank at St. James' Infirmary, Ouseley-road, Balham, S.W. 12. Clerk to the Wandsworth Union, St. John's-hill, Wandsworth, S.W. 18.

SEPTEMBER 13.—**Langley Moor.**—BRIDGES.—Renewal of the Boyne Bridge, over the Main-road at Langley Moor, near Durham, and for the supply of steelwork for the renewal of part of the bridge over the Birtley Ironworks Lines, near Birtley, for the North Eastern Railway Co. Mr. C. F. Bengough, Company's Engineer, York.

SEPTEMBER 14.—**Glasgow.**—PIPES.—Supply of 100 tons of cast-iron pipes to the T.C. Mr. J. R. Sutherland, Engineer, Water Dept., 45, John-street, Glasgow.

SEPTEMBER 20.—**Grimsby.**—HEATING, ETC.—Installation of a central heating and hot water system for the Institution of the Board of Guardians, and for the provision of a Water Softening Plant. Mr. J. F. Wintringham, Clerk, St. Mary's Chambers, Great Grimsby.

SEPTEMBER 20.—**Ipswich.**—PLANT.—Supply of steam, exhaust, circulating water and other pipes for extension steam turbine, for the T.C. Mr. F. Ayton, Manager, Electric Power Station, Constantine-road, Ipswich. Deposit, £2 2s.

SEPTEMBER 12.—**Hammersmith.**—STEELWORK.—Supply and fixing steelwork in stanchions and roof trusses of garage at Great Church-lane depot, Hammersmith, for the B.C. Mr. R Hampton Clucas, Borough Engineer, Town Hall, Hammersmith.

SEPTEMBER 21.—**London.**—MATERIALS.—Supply to the Secretary of State for India of bearing plates dog spikes, steel keys for sleepers, and wrought iron or mild steel hoop. Director-General of Stores, India Office, Whitehall, S.W. 1

SEPTEMBER 23.—**Stoke-on-Trent.**—STEAM ROLLER.—Supply of 10-ton steam road roller, with scarifier. Mr. A. Burton, Borough Surveyor, Town Hall, Stoke-on-Trent.

SEPTEMBER 30.—**Australia.**—PIER.—**Construction of ocean pier for the Manly Municipality, New South Wales. Messrs. Gordon & Gotch, 15, St. Bride-street, E.C.**

ROAD, SANITARY, AND WATER WORKS.

SEPTEMBER 3.—**Hammersmith.**—PAVING.—Paving the carriageway of Askew-road with creosoted deal blocks. Mr. R. Hampton Clucas, Borough Engineer, Town Hall, Hammersmith, W. 6.

SEPTEMBER 3.—**Mansfield.**—SEWERS.—Construction of about 1,800 yards of 30in. and 36 in. diameter concrete tube sewer, 750 yards of 15 in., 18 in. and 21 in. diameter pipe sewer, &c., in Chesterfield-road and Cock-lane, for the T.C. Mr. Waude Thompson, Borough Engineer, Market-street, Mansfield. Deposit, £2 2s.

SEPTEMBER 4.—**Rotherham.**—SEWAGE DISPOSAL.—Construction of two 80ft. diameter filters, humus tanks, &c., at the Catcliffe Sewage Works, together with the laying of certain drains, inspection chambers, &c., for the R.D.C. Mr. C. O. Rawstron, Engineer, R.D.C. Offices, Imperial Buildings, Rotherham. Deposit £1 1s.

SEPTEMBR 6.—**Evesham.**—ROADS, ETC.—Construction of road and sewers in connection with housing scheme of the R.D.C. Mr. R. J. Atkinson, Surveyor, Union Offices, Evesham. Deposit £1 1s.

SEPTEMBER 6.—**Farsley.**—STREET WORKS.—Construction of street works in Croft-street, for the U.D.C. Mr. P. T. Runton, District Bank-chambers, Bradford. Deposit, £1 1s.

SEPTEMBER 6.—**Hawarden.**—SEWERAGE.—For sewerage disposal works of housing scheme at Abermorddu, for the R.D.C. Messrs. Elliott & Brown, Burton Buildings, Nottingham. Deposit £2 2s.

SEPTEMBER 6.—**Morley.**—SEWERS.—Sewering portion of Daisy Hill, for the T.C. Mr. F. Turner, Borough Engineer, Town Hall, Morley.

SEPTEMBER 6.—**Worsley.**—SEWER.—Construction of 390 yards of sewer, etc., for the U.D.C. Mr. J. Howard, Surveyor, Town Hall, Walkden.

SEPTEMBER 8.—**Hale.**—SANITARY.—Conversion of privies at 1 to 25, Knutsford-view, Halebarns, Hale, to water-closets, for the U.D.C. Mr. G. F. Bulmer, Sanitary Inspector, Council Offices, Hale.

SEPTEMBER 10.—**Earby.**—ROADS, &C.—Construction of roads and sewers in connection with housing scheme for the U.D.C. Mr. Jas. E. Aldersley, Surveyor, Council Offices, Earby. Deposit £2 2s.

SEPTEMBER 10.—**Kidderminster.**—SEWERAGE.—Provision, laying and jointing of cast iron and stoneware pipe sewers, construction of manholes and flushing chambers, &c., in the districts of Broadwaters and Sutton Common, for the T.C. Messrs. Wilcox & Raikes, 63, Temple Row, Birmingham. Deposit, £5 5s.

SEPTEMBER 13.—**Basford.**—SEWERAGE WORKS.—Construction of sewerage and sewage disposal works in the Parish of Codnor Park, for the R.D.C. Mr. Stephen Maylan, Surveyor, Public Offices, Basford, Nottingham. Deposit, £1 1s.

SEPTEMBER 13.—**Tendring.**—SANITARY.—For house refuse removal, flushing of gullies, &c., in various parishes, for the R.D.C. Mr. A. J. H. Ward, Clerk, 42, Church-street, Harwich.

SEPTEMBER 15.—**Easingford.**—SEWERS, &C.—For street sewers and fencing in connection with 20 houses at Easingwold, for the R.D.C. Mr. H. Walker, High-street, Easingwold.

SEPTEMBER 18.—**Enfield.**—PUBLIC CONVENIENCES.—Erection of public conveniences for the U.D.C. Surveyor to the Council, Public Offices, Enfield.

SEPTEMBER 20.—**Glasgow.**—ROADS.—For completion of Castle Bank-street, for the Trustees of the Clyde Navigation. Mr. P. D. Donald, 16, Robertson-street, Glasgow. Deposit, £3 3s.

Auction Sales, Tenders, &c.

SEPTEMBER 8.—**Longleat and Shearwater.**—Messrs. J. Hibbard & Sons will sell, upon the sites of the Canadian Lumber Camps, plant and stock of three saw-mills, timber stock, hutments and stabling. Auctioneers, Newington-green, Islington, N. 1.

SEPTEMBER 9.—**Henfield, Sussex.**—Messrs. Harry Jas. Burt will sell the surplus stock-in-trade and plant of a builder at above address (within 3 minutes' walk of Henfield Station, L.B. & S.C. Rly.). Auctioneers, Steyning, Sussex.

✱SEPTEMBER 14.—**Carshalton.**—Messrs. Hampton & Sons will sell at Winchester House, Old Broad-street, E.C., valuable freehold building estate, valuable freehold property, standing on nearly 152 acres. Auctioneers, 3, Cockspur-street, S.W. 1.

SEPTEMBER 14.—**Swaything, near Southampton.**—Messrs. Ryder, Bowyer & Lane will sell by direction of the Disposal Board, 48 corrugated iron hutments. Auctioneers, 23, High-street, Southampton.

✱SEPTEMBER 15, 16* & 17.—**Slough.**—Messrs. Buckland & Sons will sell (by order of the Disposal Board), at the Mechanical Transport Depot, Slough, Bucks., huts, building material, machinery and plant. Auctioneers, Slough, Windsor; and 4, Bloomsbury-square, London.

SEPTEMBER 16.—**London, E.C. 4.**—Messrs. Butcher & Co. will sell at 155, Queen Victoria-street, E.C. 4, stock-in-trade of ironmongers' and builders' merchants. Auctioneers, 63 and 64, Chancery-lane, London, W.C. 2.

SEPTEMBER 21.—**Purfleet.**—Mr. Ed. R. Porter will sell, by direction of the Disposal Board, Ministry of Munitions, at the Military Hospital, Purfleet, buildings, fittings, &c. Auctioneer, New-road, Grays.

✱SEPTEMBER 22.—**Tewkesbury.**—Messrs. Bruton, Knowles & Co. are instructed by Messrs. Thomas Walker & Sons (Tewkesbury), 1920, Ltd., to sell valuable machinery, tractors and wagons, &c., at their Oldbury Works.

✱SEPTEMBER 22.—**Wandsworth.**—Messrs. Bradshaw, Brown & Co., will sell the leasehold riverside manufacturing premises known as Point Pleasant Wharf (No. 2), Point Pleasant, Wandsworth. Auctioneers, Billiter-square Buildings, E.C. 3.

✱SEPTEMBER 23.—**Stroud (Gloucester).**—Messrs. Bruton, Knowles & Co. are instructed by Messrs. Hawkes Bros. to sell valuable hauling plant and machinery at Dudbridge. Auctioneers, Albion-chambers, Gloucester.

SEPTEMBER 27—**London, E.C.**—Messrs. Toplis & Harding will sell at Winchester House, Old Broad-street, E.C., a freehold estate, situate Mile End Old Town, E. Auctioneers, 28, Old Jewry, EC.

SEPTEMBER—**Norwood, S.E.**—Messrs. Geo. Trollope & Sons will sell, by order of the Trustee, the freehold building estate known as Falkland Park. Auctioneers, 25, Mount-street, London, W.1.

✱OCTOBER 5.—**Hornchurch (Essex).**—Mr. Edward R. Porter will sell (by direction of the Disposal Boards) 40 huts and other temporary buildings and equipment, at Infantry Camp, Grey Towers, Hornchurch, near Romford, Essex. Auctioneers, 27, 29 & 31, New-road, Grays; King-street, Stanford-le-Hope; and 16, Fenchurch-street, E.C. 3.

OCTOBER 13.—**London, S.W.**—Messrs. Geo. Trollope & Sons will sell, at Winchester House, E.C., the valuable freehold property situate 130, Brompton-road, and Nos. 2, 4, 6, 8, Montpelier-street, S.W. Auctioneers, West Halkin-street, Belgrave-square, S.W.1.

OCTOBER 14.—**Hanover-square.**—Messrs. Knight, Frank & Rutley will sell a freehold island estate situate Euston-road, at the Hanover Estate Room. Auctioneers, 20, Hanover-square, W. 1.

✱OCTOBER 18.—**Hendon.**—Messrs. Knight, Frank & Rutley will sell (unless previously disposed of), freehold residence known as "Myles Down," comprising 2¾ acres; also pasture and building land. Auctioneers, 20, Hanover-square, W. 1.

LATE AUTUMN.—**London.**—Messrs. Knight, Frank & Rutley will sell by direction of the Council of H.R.H. the Prince of Wales, K.G., in the Hanover-square Estate Room, a freehold estate in Kennington. Auctioneers 20 Hanover-square, W.1.

Competitions.

(*See Competition News, page* 248.)

Public Appointments.

SEPTEMBER 3.—**Exeter.**—Architectural Assistant. Salary £260 per annum. Mr. J. Bennett, City Architect, Muncipal Offices.

SEPTEMBER 6.—**Gibraltar.**—Clerk of Works and General Assistant for the Sanitary Commissioners. Crown Agents for the Colonies, 4, Millbank, S.W. 1. quoting M/10153.

✱SEPTEMBER 7.—**Bromley, Kent.**—Clerk of Works required by the Borough Council. Wages £7 7s. per week. Town clerk, Municipal Buildings, Bromley, Kent.

SEPTEMBER 7.—**Durham.**—Draughtsman (Senior Grade), Draughtsman (Junior Grade), Quantity Surveyor's Assistant (Grade 1), Accounts Clerk required by the County Council. Director of Education, Shire Hall, Durham.

✱SEPTEMBER 9.—**Battle.**—Clerk of Works required by the U.D.C. Clerk to the Council, Mount-street, Battle, Sussex.

SEPTEMBER 9.—**Bognor.**—CLERK OF WORKS.—Salary £6 6s. per week. Joseph Jubb, Clerk to the Urban District Council.

SEPTEMBER 10.—**Salford.**—Head of Building and Civil Engineering Department, for the Education Committee. Salary scale, £400–£600 per annum. Mr. R. Martin, secretary, Education Offices, Salford.

SEPTEMBER 13.—**York.**—Assistant Architect. Secretary, North-Eastern Railway, York.

SEPTEMBER 15.—**West Riding County.**—Heating and Engineering Assistant for the E.C. Total salary £402 per annum. The Acting Education Architect, County Hall, Wakefield.

✱SEPTEMBER 16.—**Long Crendon.**—Architectural Assistant required by the R.D.C. Salary £250 per annum. Mr. Chas. Simmons, 2, High-street, Thame.

SEPTEMBER 24.—**Durham.**—Heating Engineer. Salary £450 per annum. Director of Education, Shire Hall, Durham.

SEPTEMBER 29.—**Warwick.**—County Architect required by the County. Salary £800 a year. Office, staff, motor cycle and sidecar supplied, and reasonable travelling expenses. Clerk to the Council, Leamington

✱NO DATE.—**London.**—Clerk of Works required by the Receiver for the Metropolitan Police District for maintenance of police buildings, courts, etc., Police Surveyor, New Scotland Yard, London, S.W.1.

✱NO DATE.—**Nigeria.**—Building Engineer for the Government Public Works Dept. Salary £840 a year free quarters, and first-class passages. Crown Agents for the Colonies 4 Millbank, S.W. 1 quoting M/9582

PRICES CURRENT OF MATERIALS.*

[Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry.—Ed.]

BRICKS, &c.

Per 1,000 Alongside, in River Thames up to London Bridge.

	£ s. d.
Best Stocks	5 4 0

Per 1000, Delivered at London Goods Stations.

	£ s. d.		£ s. d.
Kettons	3 14 6	Best Blue Pressed Staffordshire	
Best Stourbridge Fire bricks	11 15 0	Do. Bullnose	10 6 0
			10 8 6
		Blue Wire Cuts	8 8 6

GLAZED BRICKS—

Best White, Ivory, and Salt Glazed Stretchers	27 10 0	D'ble Str'tch'rs	35 0 0
		D'ble Headers	32 0 0
		One Side and two Ends	36 0 0
Headers	27 0 0	Two Sides and one End	34 10 0
Quoins, Bullnose and 4½in. Flats	33 0 0	Splays and Squints	34 10 0

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours, Hard Glaze, £5 10s. extra over white.

	s. d.		
Thames Ballast	20 6	per yard.	delivered
Pit Sand	24 6		
Thames Sand	26 6	" "	2 miles
Best Washed Sand	25 6	" "	radius
¾ in. Shingle for Ferro-Concrete	24 6	" "	Paddington.
½ in. " "	25 6	" "	

Per ton, delivered in London area.

	£ s. d.		£ s. d.
Best Portland Cement	4 4 6	"	4 10 0

77/6 alongside at Vauxhall in 80-ton lots.

Ferrocrete per ton extra on above	10 0
Best Ground Blue Lias Lime	2 19 6 at rly. depot.

NOTE.—The cement or lime is exclusive of the ordinary charge for sacks. The sacks are charged at 2s. 6d. each and credited at 2s. each if returned in good condition within three months.

Grey Stone Lime	70s. 0d. per ton delivered.
Stourbridge Fireclay in s'cks 43s. 6d. per ton at rly. dpt.	

STONE.

	s. d.
BATH STONE—delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube	2 10½
Do. do. delivered in railway trucks at Nine Elms, L. & S.W.R., per ft. cube	3 0½
Do. do. delivered on road waggons at Nine Elms Depot	3 1½

PORTLAND STONE—

Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, L. & S.W.R., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube	4	7
Do. do. delivered on road waggons at above stations, per ft. cube	4	8

White basebed, 3d. per ft. cube extra.

NOTE.—½d. ft. cube extra for every foot over 20 ft. *average*, and ½d. beyond 30 ft.

YORK STONE, BLUE—*Robin Hood Quality.*

Delivered at any Goods Station London.

	s. d.
Scappled random blocks ..... Per Ft. Cube	16 4
6 in. sawn two sides landings to sizes (under 30 ft. super.) ..... Per Ft. Super	11 4½
6 in. rubbed two sides, ditto ..... "	12 9½
3 in. sawn two sides slabs (random sizes) "	5 1
2 in. to 2½ in. sawn one side slabs (random sizes) ..... "	3 0
1½ in. to 2 in. ditto, ditto ..... "	2 7

HARD YORK—

Delivered at any Goods Station London.

Scappled random blocks ..... Per Ft. Cube	12 3
6 in. sawn two sides landing to sizes (under 40ft. super.) ..... Per Ft. Super	9 9
6 in. rubbed two sides ditto ..... "	11 7
4 in. sawn two sides slabs (random sizes) "	4 7
3 in. ditto, ditto "	5 11½
2 in. self-faced random flags ..Per Yard Super	14 8

WOOD.

GOOD BUILDING DEAL.

Inches	£ s.	
4 × 11	67 10	per standard
4 × 9	67 10	"
4 × 8	60 0	"
4 × 7	50 0	"
3 × 8	48 10	"
3 × 7	47 10	"
2½ × 7	47 10	"
3 × 6	45 0	"
3 × 11	65 0	"
2 × 11	65 0	"
3 × 9	57 10	"
2½ × 9	57 10	"
3 × 4½	47 10	"
3 × 4	47 10	"

PLANED BOARDS.

1 × 11	67 10	"
1 × 9	65 0	"

PLAIN EDGE FLOORING.

Inches		
⅝	40/-	square
¾	45/-	"
1	52/6	"
1¼	66/-	"
1½	75/6	"

TONGUED AND GROOVED FLOORING.

Inches		
1	52/-	square
1¼	65/-	"
1½	75/-	"

WOOD (*Continued*).

MATCHINGS (BEST).

Inches		
⅝	36/-	square
¾	42/6	"
1	54/-	"

BATTENS.

Inches	£ s.	
½ × 2	45 0	per standard

SAWN LATHS.

Per bundle				0	6 6
Dry Wainscot Oak, per ft. super, as inch	0	3 6	to	0	4 0
⅜ in. do. do.	0	3 0	..		—
Dry Mahogany—Honduras, Tabasco, African, per ft. super, as inch	0	2 6	to	0	3 0
" Cuba, Mahogany	0	4 0	to	0	4 6
Teak (Rangoon, Moulmein or Java), per load	75	0 0	to	85	0 0
American Whitewood planks, per ft. cube	0	18 0	to	1	4 0
Scotch Glue, per cwt.	10	0 0	..		—
Liquid Glue, per cwt.	6	12 0	..		—

SLATES.

1st quality slates from Bangor or Portmadoc in truck load delivered London area. Per 1,000 of 1,200.

		£ s. d.
Best Blue Bangor Slates,	24 by 12	56 10 0
" " "	22 by 12	46 0 0
First quality "	22 by 11	42 10 0
" "	20 by 12	42 0 0
Best Blue Portmadoc	20 by 10	36 10 0
" "	18 by 10	29 10 0
First quality "	18 by 9	24 5 0
" "	16 by 10	22 15 0
" "	16 by 8	18 0 0

TILES.

	Per 1,000 f.o.r. London. £ s. d.
Best machine-made tiles from Broseley or Staffordshire district	6 15 0
Ditto hand-made ditto	7 5 0
Ornamental ditto	7 2 6
Hip and valley tiles (per dozen)	0 15 0

METALS.

JOISTS, GIRDERS, &c., TO LONDON STATION PER TON—

	£ s. d.
R. S. Joists, cut and fitted	38 0 0
Plain Compound Girders	42 0 0
" Standeons	44 0 0
In " Roof Work	48 0 0

WROUGHT-IRON TUBES AND FITTINGS—

(Discount off List for lot of not less than £15 net value delivered direct from works. 5 per cent. less above gross discounts, carriage forward if sent from London stocks.)

	Sizes up to and including ⅜ in. Tubes.	Fittings.	Sizes up to and including 2in. Tubes.	Fittings.	Sizes 2½ in. to 6 in. Tubes.	Fittings.
Gas	+ 7½	+ 5	— 5	— 2½	— 17½	
Water	+17½	+15	Net	+ 6½	— 15	
Steam	+28½	+26½	+ 5	+ 16½	— 12½	
Gal. Gas	+32½	+30	+ 5	+ 22½	— 7½	
" Water	+45	+42½	+ 10	+ 33½	— 5	
" Steam	+57½	+55	+ 15	+ 45	— 2½	

L.C.C. COATED SOIL PIPES—London Prices ex works.

	Pipe. s. d.	Bends, stock angles. s. d.	Branches, stock angles. s. d.
2 in. per yd. in 6 fts.	6 4	4 6	5 5
2½ in. "	7 3½	4 11½	6 9
3 in. "	9 0½	5 5	8 1½
3½ in. "	10 0	6 9	9 5½
4 in. "	10 11½	7 8	10 9½

RAIN-WATER PIPES, &c.

	Pipe. s. d.	Bends, stock angles. s. d.	Branches, stock angles. s. d.
2 in. per yd. in 6fts. plain	5 6	3 0	4 0
2½ in. " "	6 0	3 6	5 0
3 in. " "	7 2	4 4	6 8
3½ in. " "	8 8	5 4	7 9
4 in. " "	9 8	6 4	9 4

L.C.C. DRAIN PIPES,—9 ft. lengths. London Prices. 4 in., 13/6. .. 5 in., 1£/6. .. 6 in.. 19/11.

IRON—

	Per ton in London. £ s. d.		£ s. d.
Common Bars	34 10 0	to	35 10 0
Staffordshire Crown Bars—good merchant quality	35 0 0	..	37 0 0
Staffordshire "Marked Bars"	36 10 0	..	38 10 0
Mild Steel Bars	36 0 0	..	38 0 0
Steel Bars. Ferro-Concrete quality, basis price	36 0 0	..	38 0 0
Hoop Iron, basis price	44 0 0	..	46 0 0
" Galvanised	62 0 0	..	66 0 0
Sheet Iron Black—Ordinary sizes to 20 g.	50 0 0	..	52 0 0
" " 24 g.	51 0 0	..	53 0 0
" " 26 g.	53 0 0	..	55 0 0
Sheet iron, Galvanised flat, ordinary quality—Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	58 0 0	..	60 0 0
Ordinary sizes to 22 g. and 24 g.	59 0 0	..	61 0 0
Ordinary sizes to 26 g.	61 0 0	..	62 0 0
Ordinary sizes to 20 g. .. 22 g. and 24 g.	58 0 0	..	60 0 0
" " 22 g. and 24 g.	59 0 0	..	61 0 0
Ordinary sizes to 26 g.	61 0 0	..	62 0 0

METALS (*Continued*).

	Per ton in London. £ s. d.		£ s. d.
Galvanised Corrugated Sheets—Ordinary sizes, 6 ft. to 8 ft. 20 g.	60 0 0	..	62 0 0
Ordinary sizes, 22 g. and 24 g.	61 0 0	..	63 0 0
Ordinary sizes, 26 g.	62 0 0	..	65 0 0
Sheet Iron, Galvanised, flat, best quality—Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	60 0 0	..	62 0 0
Best Soft Steel Sheets, 22 g. and 24 g.	61 0 0	..	63 0 0
Best Soft Steel Sheets, 26 g.	63 0 0	..	64 0 0
Cut Nails, 3 in. to 6 in.	47 10 0	..	48 10 0

(Under 3 in. usual trade extras.)

LEAD, &c.

Delivered in London.

	£ s. d.		£ s. d.
LEAD Sheet, English, 4 lb. and up	51 0 0	..	—
Pipe in coils	51 10 0	..	—
Soil Pipe	54 0 0	..	—
Compo pipe	55 0 0	..	—

NOTE—Country delivery, 30s. per ton extra; lots under 5 cwt., 1s. 6d. per cwt. extra. Cut to sizes, 1s. cwt. extra.

Old lead, ex London area, at Mills ..... per ton	31 0 0	..	—
Do., ex country, carriage forward ..... per ton	32 0 0	..	—

COPPER—Strong Sheet ....per lb.	0 2 3	..	—
Thin "	0 2 4	..	—
Copper nails "	0 2 3	..	—
Copper wire "	0 2 4	..	—
TIN—English Ingots "	0 2 9	..	—
SOLDER—Plumbers' "	0 1 6	..	—
Tinmen's "	0 2 0	..	—
Blowpipe "	0 2 7	..	—

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES AND IN SQUARES IN ORDINARY SIZES

	Per Ft.		Per Ft.
15 oz. fourths	8d.	32 oz. fourths	11d.
" thirds	8½d.	" thirds	1/-
21 " fourths	9d.	Fluted, Obscured and Enamelled Sheet,	
" thirds	9½d.	15 oz.	10d.
26 " fourths	10d.	21 "	1/-
" thirds	11d.		

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

	Per Ft.
⅛ Rolled plate	6½d
⅛ Rough rolled and rough cast plate	7½d.
¼ Rough rolled and rough cast plate	8½d
Figured Rolled, Oxford Rolled, Baltic, Oceanic, Arctic, Stippolyte, and small and large Flemish white	7½d
Ditto, tinted	9½d.
Rolled Sheet	7d.
White Rolled Cathedral	7d.
Tinted do.	9d.

PAINTS, &c.

	£ s. d.
Raw Linseed Oil in pipes ..... per gallon	0 8 3
" " " in barrels .... "	0 8 5
" " " in drums .... "	0 8 7
Boiled " " in barrels .... "	0 8 11
" " in drums .... "	0 9 1
Turpentine in barrels .... "	0 12 8
" in drums (10 gall.) .. "	0 13 2
Genuine Ground English White Lead, per ton (In not less than 5 cwt. casks.)	81 10 0

GENUINE WHITE LEAD PAINT—

"Father Thames," "Nine Elms," "Park," "Supremus" and other best brands (in 14 lb. tins) not less than 5 cwt. lots ..... per ton delivered	112	0	0
Red Lead, Dry (packages extra) .. per ton	60	0	0
Best Linseed Oil Putty ..... per cwt.	1	7	0
Filocol ..... per cwt.	1	0	6
Size. X D Quality ..... fkn.	0	5	9

VARNISHES, &c.

	Per gallon. £ s. d.
Oak Varnish ..... Outside	0 18 0
Fine ditto ..... ditto	1 0 0
Fine Copal ..... ditto	1 1 6
Pale Copal ..... ditto	1 2 6
Pale Copal Carriage ..... ditto	1 4 6
Best ditto ..... ditto	1 14 6
Floor Varnish ..... Inside	0 19 0
Fine Pale Paper ..... ditto	0 18 0
Fine Copal Cabinet ..... ditto	1 2 6
Fine Copal flatting ..... ditto	1 0 6
Hard drying Oak ..... ditto	0 18 0
Fine Hard drying Oak ..... ditto	0 19 0
Fine Copal Varnish ..... ditto	1 0 6
Pale ditto ..... ditto	1 2 6
Best ditto ..... ditto	1 14 6
Best Japan Gold Size	0 16 6
Best Black Japan	1 0 9
Oak and Mahogany Stain (water)	0 17 6
Brunswick Black	0 11 9
Berlin Black	0 19 9
Knotting (patent)	1 18 6
French and Brush Polish	1 14 0
Liquid Dryers in Terebine	0 16 0
Cuirass Black Enamel	0 7 0

* The information given on this page has been specially compiled for THE BUILDER and is copyright. Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

CURRENT PRICES FOR BUILDING WORK IN LONDON.

EXCAVATOR.

		s.	d.
Digging and throwing or wheeling and filling carts, and carting away to shoot—6 ft. deep	per yard cube	24	0
Add if in clay	" "	2	0
Add for every additional depth of 6 ft.	" "	1	6
Planking and strutting to trenches	per foot super	0	7½
Do. to sides of excavation, including shoring	" "	1	6

CONCRETOR.

Portland cement concrete in foundation 1 to 6	per yard cube	54	0
Add if in underpinning in short lengths	" "	10	0
Add if in floors 6 in. thick	" "	4	0
Add if in beams	" "	5	0
Add if aggregate 1 : 2 : 4	" "	15	0
Add for hoisting not exceeding 10 ft. beyond the first 10 ft.	" "	4	6

BRICKLAYER.

		£	s	d.
Reduced brickwork in lime mortar and Fletton bricks	per rod	48	10	0
Add if in stocks	"	12	10	0
Add if in Staffordshire blues	"	34	10	0
Add if in Portland cement and sand	"	4	15	0

FACINGS.

Extra for facing in English or Flemish bond for every 10s. per 1,000 over the price of the common bricks	per ft. super	0	0	1¼

POINTING.

Neat flat strucks or weathered joint	" "	0	0	3½

ARCHES.

Extra only to the price of ordinary brickwork :—				
Fair external in half brick rings	" "	0	1	0
Axed in stocks	" "	0	2	0
Rubbed and gauged jointed in putty camber or segmental	" "	0	7	0

SUNDRIES.

Damp course in double course of slates breaking joint and beaded in Portland cement	" "	0	1	8
Setting ordinary register grates and stoves	each	1	5	0
Setting kitchener, including fuming flues, &c., with all necessary fire bricks	"	6	15	0

ASPHALTER.

		s.	d.
Half-inch horizontal damp course	per yard sup.	9	0
Three-quarter-inch vertical damp course	" "	14	3
One inch on flats in two thicknesses	" "	12	0
Angle fillet	per foot run	0	3
Skirting and fillet 6 in. high	" "	1	6

MASON.

		s.	d.
York stone templates fixed	per foot cube	22	0
York stone sills fixed	" "	35	0
Bath stone and all labour fixed	" "	16	9
Portland stone fixed	" "	25	9

SLATER.

		s.	d.
Welsh 16 in. × 8 in. 3 in. lap, including nails	per square	98	0
Do. 20 in. × 10 in. Do. Do.	"	115	0
Do. 24 in. × 12 in. Do. Do.	"	117	6

CARPENTER AND JOINER.

		s.	d.
Fir framed in plates	per foot cube	9	6
Do. joists	" "	10	6
Do. roofs, floors and partitions	" "	11	9
Do. trusses	" "	14	0

		¾″	1″	1¼″	1½″
Deal rough close boarding	per sq.	60/-	81/-	100/-	108/-

		s.	d.
Flat centering for concrete floor, including struts or hangers	"	68	0
Do. to beams	per ft. sup.	1	10
Centres for arches	"	2	4
Gutter boards and beams	"	1	9

FLOORING.		¾″	1″	1¼″	1½″
Deal-edges shot	per sq.		82/-	104/-	120/-
Do. tongued and grooved	"		88/-	110/-	127/-
Do. matchings	"	74/-	89/-		
Moulded skirting, including backings and grounds	per ft. sup.	2/4	2/8	3/2	3/8

		s.	d.
SASHES AND FRAMES.			
One-and-a-half moulded sashes or casements	per foot super	2	0
Two Do. Do. Do.	" "	2	6
Add for fitting and fixing	" "	0	6
Deal-cased frames with 1 in. inner and outer linings, 1½ in. pulley stiles tongued to linings, hard wood sills with 2 in. moulded sashes in squares double hung, double hung with pulleys, lines and weights ; average size	" "	5	6

DOORS.		1½″	1¾″	2″
Two-panel square framed	per ft. sup.	2/8	2/11	3/1
Four-panel Do.	"	3/-	3/4	3/7
Two-panel moulded both sides	"	3/4	3/7	3/10
Four-panel Do. Do	"	3/8	3/11	4/2

CARPENTER AND JOINER—continued.

FRAMES.		s.	d.
Deal wrot moulded and rebated	per foot cube	22	0

		1″	1¼″	1½″
Plain deal jamb linings framed	per ft. sup.	2/3	2/5	2/9
Deal shelves and bearers	"	2/-	2/2	2/3
Add if cross tongued	"	2/-	2/-	2/-

STAIRCASES.		1″	1¼″	1½″	2″	2½″
Deal treads and risers in and including rough bracelets	"	3/4	4/-	4/8	—	—
Deal strings wrot in both sides and framed	"	4/6	4/9	—	—	—

		s.	d.
Housings for steps and risers	each	1	0
Deal balusters, 1 in. × 1¼ in.	per ft. run.	0	9
Mahogany handrail ; average 3 in. × 3 in.	" "	6	3
Add if ramped	" "	12	6
Add if wreathed	" "	25	0

FIXING ONLY IRONMONGERY (INCLUDING SCREWS).

6 in. barrel bolts	9d.	Rim locks	2/6
Sash fasteners	1/-	Mortice locks	5/6
Casement fasteners	1/6	Patent spring hinges and letting in to floor and making good	20/-
Casement stays	1/3		
Cupboard locks	1/6		

FOUNDER AND SMITH.

		s.	d.
Rolled steel joists	per cwt.	43	0
Plain compound girders	"	47	0
Do. stanchions	"	49	0
In roof work	"	53	0

RAIN-WATER GOODS.

		3″	4″	5″	6″
Half-round plain rebated joints	ft. run	2/-	2/6	3/9	4/3
Ogee Do. Do.	"	2/6	3/3	4/-	5/-
Rain-water pipes with ears	"	2/11	3/9		
Extra for shoes and bends	each	4/7	6/3		
Do. stopped ends	"	2/-	2/6	3/9	4/3
Do. nozzles for inlets	"	2/3	2/9	4/-	4/6

PLUMBER.

		s.	d.
Milled lead and laying in flashings and gutters	per cwt.	81	0
Do. Do. in flats	"	76	0
Extra labour and solder in coated cesspools	each	8	0
Welt joint	per ft. run.	0	6
Soldered seam	" "	2	3
Copper nailing	" "	0	8

		½″	¾″	1″	1½″	2″	4″
Drawn lead waste	per ft. run	1/2	1/11	2/3	4/-	5/-	
Do. service	"	1/10	2/5	3/-	4/9		
Do. soil	"						8/-
Bends in lead pipe	each					4/-	10/-
Solderer's stop ends	"	1/6	2/-	2/6	3/6	4/3	
Red lead joints	"	1/1	1/4	1/7	2/4	3/-	6/-
Wiped soldered joints	"	3/6	4/3	5/-	6/-	8/-	12/-
Lead traps and cleaning screws	"				18/-	24/-	
Bib cocks and joints	"	7/6	11/3	18/-	48/-		
Stop cocks and joints	"	18/-	20/-	30/-	75/-		

PLASTERER.

		s.	d.
Render, float and set in lime and hair	per yard sup.	3	4
Do. Do. siripite	" "	3	9
Do. Do. Keen's	" "	5	0
Add sawn lathing	" "	2	0
Add metal lathing	" "	3	0
Portland cement screed	" "	3	0
Do. plain face	" "	4	6
Mouldings in plaster	per 1 girth	0	3
One-and-a-half granolithic pavings	per yard sup.	6	9

GLAZIER.

21 oz. sheet plain	per foot sup.	1	10
26 oz. Do.	" "	2	0
Obscured sheet	" "	2	3
¼ in. rolled plate	" "	1	3½
¼ in. rough rolled or cast plate	" "	1	4½
¼ in. wired cast plate	" "	1	9½

PAINTER.

		s.	d.
Preparing and distempering, 2 coats	per yard sup.	1	6
Knotting and priming	" "	1	0
Plain painting 1 coat	" "	1	6
Do. 2 coats	" "	2	4
Do. 3 coats	" "	3	2
Do. 4 coats	" "	4	0
Graining	" "	3	0
Varnishing twice	" "	2	6
Sizing	" "	0	4
Flatting	" "	0	9
Enamel	" "	2	0
Wax polishing	per foot sup.	0	11
French polishing	" "	1	9
Preparing for and hanging paper	per piece	2/- to 5/-	

PROPOSED NEW BUILDINGS AND OTHER WORKS.*

In these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works, at the time of publication, have been actually commenced. Abbreviations:—T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; B.G. for Board of Guardians; L.C.C. for London County Council; B.C. for Borough Council; and P.C. for Parish Council.

BATLEY.—Plans passed by the U.D.C.: Two cottages at Occupation-lane, for J. Carr, Ltd.; new shop front, in Commercial-street, for S. Hilton & Sons; alterations to Blacksmith's Arms, Brownhill; alterations to shops and premises in Wilton-street, for Batley Co-operative Society, Ltd.; store-room in Bradford-road, for R. Dewhirst & Co., Ltd.; and motor garage in Ealand-road, for Mr. E. Stockdale.

BASINGSTOKE.—The T.C. have approved plans for the erection of twelve bungalows at Winklebury.

BIRMINGHAM.—A panel of ten Birmingham architects—with Mr. J. P. Bridgwater as superviser—has been formed to deal with the laying out and planning of about 30 acres of land near the Washwood Heath tram terminus. Here will be built approximately 300 houses and retail shops. Designs have been prepared and provisionally submitted to the Housing Committee, and complete drawings are being prepared for submission in two or three weeks' time. The principle has been that the architects on the panel will prepare their own designs for houses, though working together. The type of house to be built will be the parlour type, with three bedrooms, and though specifications and quantities have not yet been made, it is thought that the cost will be from £900 to £950 each; while they will, of course, be built to take advantage of the Government subsidy. The scheme is being worked in connection with the Birmingham Housing Committee, and the houses will be built for the Housing Committee by contractors, with whom the panel will work in conjunction. The Housing Committee are said to be most favourably inclined to the scheme.

BISHOPS STORTFORD.—Additions to premises of Messrs. Holland and Barrett, Water-lane.

CHELTENHAM.—Plans passed by T.C.:—Mr. F. P. Parry, saw mill, Ashford-road; Vicar and Churchwardens of Emmanuel Church, alterations to Emmanuel Church, Naunton-crescent; Mr. L. S. Wood, additions to Stanley Villa, Christ Church-road; Mr. R. W. Pearson, alterations Pengwern College, Pittville Circus-road (amended plan); Madame Helene Gransden, bathroom, 3, Bayshill Lawn, Parabola-road; Messrs. Meats & Co., shed, Keynsham-street; Mr. W. Tayler, addition to Oberlin Lodge, Hatherley; Mr. W. Hopkins, additions 38, Naunton-crescent; Mr. J. L. E. Bendall, new road off Naunton-lane (Trowscoed avenue).

COLNE.—The Hospital Committee has passed the plans for a new hospital.

HAMPSTEAD.—Hopes are entertained by the Hampstead Garden Suburb that its great scheme of extension, which was held up owing to the war, will now go ahead. The sum involved amounts to £3,000,000, and the extension will cover some 350 acres of ground, on which 3,000 houses of various descriptions will be built. There will be a twenty-one acre playing field, and twenty acres of the woods will be preserved. The plans for this large development were fully prepared before the war. Streets were actually laid out, and the owning society is now only waiting until its architect, surveyors, and labour are again fully mobilised. Ealing Garden Suburb, which is owned by the same society, also hopes to be able to carry out an extension which was in contemplation before the war.

HEXHAM.—Plans passed by R.D.C.: Cottage at Cade Hill-road, Painshawfield, Stocksfield, for Mr. G. W. R. Burns; out-office at Middle House, near Newbrough, for the Duke of Northumberland, Alnwick Castle.

HINCKLEY.—Plans passed by U.D.C.: Additions to factory in Stockwell Head, for Grewcock & Co.; additions to factory in Regent-street, for Mr. Simmons; and a grand stand at the Holywell ground, for the Hinckley United Football Club.

LLANELWST.—Plans of alterations to be carried out at the premises of the London Joint City and Midland Bank have been approved. Plans of a new house for Mr. William Trivett in Bridge-street have been submitted to the U.D.C.

MYTHOLMROYD.—The U.D.C. has passed plans for an extension at Albert Mill.

READING.—Plans have been passed for buildings to replace those recently destroyed by fire at Petty & Son's printing works, and building operations will shortly commence.

ST. ANNES-ON-SEA.—Plans passed by U.D.C.: Houses, Clifton-drive South, Mr. C. Lord; two houses, Clifton-drive North, T. & C. Barlow; and two houses, St. Andrew's-road North, Mr. J. H. Sharp.

SALFORD.—Plans passed:—Construction of lavatory accommodation for offices, Mountford-street and Vere-street, Salford; house, Waterpark-road, Broughton; house, Holden-road and Cavendish-road, Broughton; sanitary accommodation, "Dog and Partridge," Bolton-road, Pendleton; additions to works, Unwin-street.

STOKESLEY.—The R.D.C. has passed plans for a Parish Hall at Yarm for St. Mary's Church, and the rebuilding and enlarging of a portion of the buildings at the School Farm, Broughton.

UXBRIDGE.—Plans passed by R.D.C.: Machine and coopers' shops for the Gelatinous White Co.; two cottages at Springwell-lane, Harefield; and a villa, at Harefield-road, Hillingdon East.

WAKEFIELD.—Plans passed: Mr. P. Turner, alterations and additions to Balne Mills; H. Holdsworth & Co., recreation room, &c.; Diamond Coal Cutter Co., Ltd., additions to Stennard's Works; Carbert & Bowers, two houses, Castle-road; E. Abson & Sons, store to furniture warehouse, in Kirkgate; Mr. H. Dobson, additions to colour works, in Chald-lane, for Brassard & Crawford; Mr. W. Priddle, lock-up shop in Kirkgate and the Springs, for F. W. Woolworth & Co., Ltd.; Mr. J. H. Pitt, the conversion of Great Bull Hotel in Westgate and Market-street into shop, restaurant, office and caretaker's house, for the Prudential Insurance Co., Ltd.; Moore & Crabtree a spinning mill in Ings-road, for M. P. Stonehouse.

WHITESIDES WAY.—Plans have been passed for the erection of two bungalows for Mr. W. Eastwood.

FIRES.

STOCKPORT.—Damage amounting to over £20,000 has been caused by fire at the corn mills of E. Plant & Sons.

HACKNEY.—A fire has occurred at the works of the Wood Wool and Fibre Co., in Gainsborough-road, Hackney-wick, E.,

PATENTS.

APPLICATIONS PUBLISHED.*

104,342.—Soc. de Constructions Economiques: Removable reinforced concrete buildings and structures.

144,440.—E. G. Harcourt: Means for attaching metal and other fittings to doors, window sashes, and articles of furniture.

144,459.—J. J. Moody: Sliding windows.

144,480.—H. L. Doulton and C. H. Giles: Drinking fountains.

144,492.—J. Stephenson: Machine for the manufacture of building blocks, bricks, and similar articles.

144,546.—J. H. Harrison: Moulds for casting articles of concrete and like plastic material.

144,549.—E. Smith: Locking device for window-sashes.

144,559.—H. C. Hansen: Cooking ranges and the like.

144,775.—F. W. Howorth (Burglar-proof Lock and Hardware Corporation): Locks.

144,776.—J. A. A. Nystrom: Presses for the manufacture of hollow building blocks.

144,787.—J. L. Palmer and H. Melville-Smith: Interlocking bricks or blocks and slabs for building purposes.

144,808.—J. S. Shaw, S. H. Shaw and A. E. Shaw: Fireplaces and boilers for domestic purposes.

144,812.—H. J. Clare and G. E. Clare: Construction and erection of cavity walls for buildings.

144,844.—T. Eccles and M. Gill: Tiling and slating.

144,858.—A. Garner and T. Squire: Fire-grates.

144,891.—W. G. Ottewill: Bolts.

144,913.—C. N. Wisner: Concrete buildings.

144,930.—S. R. Parkes: Sash lifts.

144,935.—T. Green and B. A. Oldham: Ventilators, chimney-pots and cowls.

144,938.—W. T. Allen: Domestic fire-grates.

144,975.—M. M. Smith: Apparatus for use in constructing concrete and like walls.

144,976.—J. A. A. Nystrom: Apparatus for use in the manufacture of hollow building-blocks.

145,140.—W. T. Watson, J. A. Reid and J. R. McKenzie: Buildings of hollow wall construction.

145,146.—F. Wregg: Means for use in jointing pipes and tubes.

145,150.—W. F. Banham: Locks for doors.

145,167.—B. C. Bond: Locking latches for doors.

145,178.—J. Thame: Steel construction for buildings.

145,190.—G. Helps: Joints of main pipes.

145,191.—F. H. Neale: Casement stays and fasteners.

145,193.—F. W. Lanchester: Construction and roofings of buildings for exhibitions and like purposes.

* All these applications are now in the stage in which opposition to the grant of Patents upon them may be made.

NEW COMPANIES.

THE particulars quoted below have been compiled by Messrs. Jordan & Sons, Ltd., Company Registration Agents, of 116 & 117, Chancery-lane, W.C. 2, from the documents available at the Companies' Registry.

W. H. BROWN (LEATHERHEAD), LTD. (169,529). Registered August 9. Builders and contractors. Nominal capital, £5,000.

FREDK. COPE & CO., LTD. (168,958). Registered July 12. Builders and decorators. Nominal capital, £10,000.

EASTMINSTER ESTATES, LTD. (168,935). Registered July 10. 6, Breams' Buildings, Chancery-lane, W.C. To develop lands and buildings. Nominal capital, £5,000.

FIRTH & WHITTINGTON, LTD. (169,120). Registered July 19. 15, Carlton-road, Doncaster. Builders and contractors. Nominal capital, £1,000.

HAMPSHIRE CONCRETE HOUSE BUILDING ASSOCIATION, LTD. (169,173). Registered July 21. The Estate Office, Blighmont Park, Millbrook, Southampton. Nominal capital, £3,000.

MASTIC ROOFING & PAVING CO., LTD. (169,230). Registered July 23. 3, Broad-street Buildings, Liverpool-street, E.C. Asphalters, tar paviors, damp course and roofing materials manufacturers. Nominal capital, £5,000.

SPICER & SON, LTD. (159,279). Registered July 26. Newland, High Wycombe, Bucks. Timber, slate, cement, brick, and lime merchants, &c. Nominal capital, £25,000.

J. STRAW, LTD. (168,965). Registered July 12. Builders and contractors. Nominal capital, £1,000.

F. TROY & CO., LTD. (169,339). Registered July 29. 194, Finchley-road, N.W. 3. Builders and decorators. Nominal capital, £25,000.

WEST WITTON GANISTER FIREBRICK CO., LTD. (169,284). Registered July 26. Nominal capital, £30,000.

WATERGATE REFRACTION CO., LTD. (169,376). Registered July 30. 21, Mosley-street, Newcastle-upon-Tyne. Brick, tile and sanitary goods manufacturers. Nominal capital, £20,000.

OUTPUT AND HOURS OF LABOUR.

AT the annual meeting of the British Association at Cardiff last week, Professor F. S. Lee, Professor of Physiology, Columbia University, and Consulting Physiologist to the United States Public Health Service, read a paper on "Some Phenomena of Industrial Fatigue," in the course of which he said that the hourly output in physiological operations was practically always increased by a diminution of hours, but the effect on the total output depended on the balance between increased productive power and lessened hours of work. In the very severe tasks of the millmen in tin-plate manufacture it had been found that the total output was 8.3 per cent. greater in the six hour than in the eight hour shift. But this lent no support to the argument for a universal six-hour day; what period represented the most nearly universal optimum for a working day was still an open question. A comparison of the diurnal curves of the output of the eight- and ten-hour factories investigated by the United States Public Health Service showed that a conspicuous feature of work on the eight-hour plan was its steady maintenance of output in contrast to the fluctuations of output of the ten-hour plan. Each added contribution of observation and experiment appeared more and more to support the view that from the standpoint of physiological essentials the optimum working period was comparatively short but varied in duration with the kind of work performed. Eight hours was probably too long for certain kinds of work and too short for others. A universal eight-hour day would be unscientific. Recess periods during the working spell nearly always resulted in increased hourly output and frequently an increased output for the whole day.

* See also our List of Contracts, Competitions, &c.

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach him *not later than first post on Wednesday.*

* Denotes *accepted.* † Denotes *provisionally accepted.*

‡ Denotes *recommended for acceptance.*

§ Denotes *accepted subject to modifications.*

BATTLE.—For the erection of 60 cottages, for the U.D.C. Messrs. Callow & Callow, architects, 47, Havelock-road, Hastings :—

*R. Cook & Sons, Crawley	£54,777	0	0
Brailsford & Co., St. Leonards-on-Sea	55,326	12	6
A. Hoad, St. Leonards-on-Sea	56,435	0	0
Hayhurst & Wright, Hastings	65,760	17	3
Peerless, Dennis & Co., Eastbourne	69,303	0	0
Hybart, Broadhead & Co., London	69,340	0	0
Taylor Bros., Hastings	69,674	0	0

DUMBARTON.—For the erection of 56 houses for the T.C. Mr. Wm. A. Macartney. A.M.I.C.E., Engineer. Quantities by Mr. John H. Allan, Glasow:—

*J. Crawford (*Brick*), Glasgow	£21,821	11	0
*Alex McRae (*Joiner*), Candross	7,068	10	11½
*Dougall & Co. (*Joiner*), Dumbarton	5,530	13	0
*John Conkie (*Joiner*), Dumbarton	2,523	6	4½
*R. Buchanan (*Glazier*), Dumbarton	222	3	8
*C. White & Co. (*Slater*), Glasgow	4,869	4	9
*Kilpatrick & Brenner (*Plumber*), Dumbarton	4,990	4	10
*Gas Department (*Gasfitter*), Dumbarton	936	3	9
*Robert Denlin (*Plaster*), Dumbarton	3,714	14	11
*D. Hempstead (*Painter*), Dumbarton	806	2	4
*S. Woods (*Painter*), Dumbarton	381	3	6
	£52,863	19	1

GLASGOW.—For work on the Cathcart-road housing scheme, for the T.C. :—

*M. Stewart & Co. (*Mason and brickwork*)	£767,591
*Wilson Brothers (*Mason and brickwork*)	68,477
*Hugh McTaggart & Sons (*Carpenter, joiner, &c.*)	38,159
*William Walker & Sons (*Slater*)	3,304
*Cooper & Duff (*Plumber*)	16,123
*David H. McKellar (*Plaster*)	5,042
*James Stirling (*Painter*)	3,169
*James P. McPhie (*Glazier*)	676

* Accepted subject to the approval of the Scottish Board of Health.

IMBER COURT, EAST MOLESEY (SURREY).—For the erection of training stables, residences, &c., for the Receiver for the Metropolitan Police District. Mr. J. Dixon Butler, F.R.I.B.A., Architect, New Scotland-yard, S.W. Quantities by Messrs. Thurgood & Chidgey, 18, Adam-street, Adelphi, W.C. :—

F. & H. Higgs	£30,330
J. W. Dickens	30,672
Soole & Son	30,800
Smith & Sons	30,825
Rice & Son	31,122
Dovey & Co.	31,200
W. H. Lorden & Sons	31,439
F. C. Minter	31,450
E. Potterton	41 500

ROCHFORD.—For the erection of a disinfector house, at the Poor Law Institution, for the R.D.C. :—

*F. G. Bethley, Southend-on-Sea £145 10

Only one tender submitted. Architect's estimate, £125 10s.

SEER GREEN (BUCKS.).—For the erection of eight houses at Seer Green, for the Amersham R.D.C. Mr. P. A. Hopkins, M.S.A., architect, "Crossways," Gerrard's Cross. Quantities by Mr. F. N. Falkner, 7, Hills-place, Oxford Circus.

‡B. Worley, Seer Green, Bucks.	£8,370	0	
Antill Construction Co., Ltd., 24, Seymour-place, Marble Arch	9,932	10	
W. R. Smith, Burham, Bucks.	9,401	10	
Y. J. Lovell & Son, Gerrard's Cross	8,884	0	

[These estimates include for drains, fences, paths roads and large work and store sheds to each cottage.]

SOUTH KIRBY.—For the erection of 556 dwelling houses of various types, and six combined houses and shops; also for the roadmaking and construction of sewers in connection with the housing scheme, for the Hemsworth R.D.C. Messrs. Garside & Pennington, architects, Ropersgate, Pontefract :—

*Trollope & Colls, Ltd., London (All trades)	£589,938	0	0
*Handel Roberts, Gainsboro', (Roads and Sewers)	32,500	0	0
*J. Lamprey Ackworth (Tree planting)	2,342	18	8

ST. DOMINICK.—For the erection of a new memorial hall. No tenders received.

SWINDON.—For alterations and decorations at No. 17, Bath-road, for the Highworth R.D.C. Mr. R. I. Beswick, M.S.A., architect, 10, Victoria-road, Swindon :—

*Blackwell Bros., Swindon	£492	10
H. C. Cook, Swindon	509	0
Bayliss, Swindon	664	5
E. W. Beard, Swindon	675	0
C. R. Palmer, Rodburne Cheney, Swindon	772	0

TO CORRESPONDENTS.

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We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples sent to or left at this office, unless he has specially asked for them.

All drawings sent to or left at this office for consideration should bear the owner's name and address on either the front or back of the drawing. Delay and inconvenience may result from inattention to this.

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